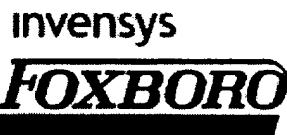



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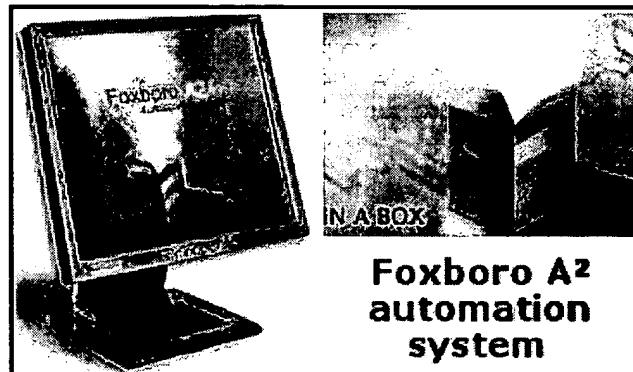
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- Enhanced Foxboro engineering tools from Invensys make it easier than ever to unlock the power of the I/A Series automation system
- Invensys implements major fieldbus-based automation solution for Shell Canada at the Athabasca Oil Sands Project
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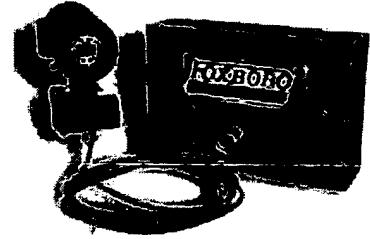


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## About Invensys Foxboro...

**Invensys Foxboro** is part of the **Invensys Production Management Division** and provides world class **Foxboro** information technology, automation, and process solutions to a wide range of manufacturing applications for the cement, chemical, metals & mining, oil & gas, pulp & paper, power, pharmaceutical and specialty chemicals. Besides **Foxboro**, the division includes **APV**, **Baan**, **SimSci-Esscor**, **Triconex** and **Wonderware**.

The **Invensys Production Management Division of Invensys plc** works closely with customers to provide solutions that help them maximize return on investments and optimize performance across their supply chain. Invensys has performance improvement expertise and technology encompassing the entire value chain -- from the production line to executive offices; from customer relationship and procurement management to distribution logistics. With more than 50,000 worldwide installations, we serve the oil, gas, and chemicals sectors; power generation; food, beverage and personal healthcare; fine chemicals/pharmaceuticals; pulp and paper; mining and cement; and discrete and hybrid manufacturing sectors. The division headquarters are in Foxboro, Massachusetts USA.

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David Marshall	<b>President</b> APV Baker
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Peter Tompkins	<b>President</b> Eurotherm
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Ricardo Agostinelli	<b>President</b> Process Systems Latin America
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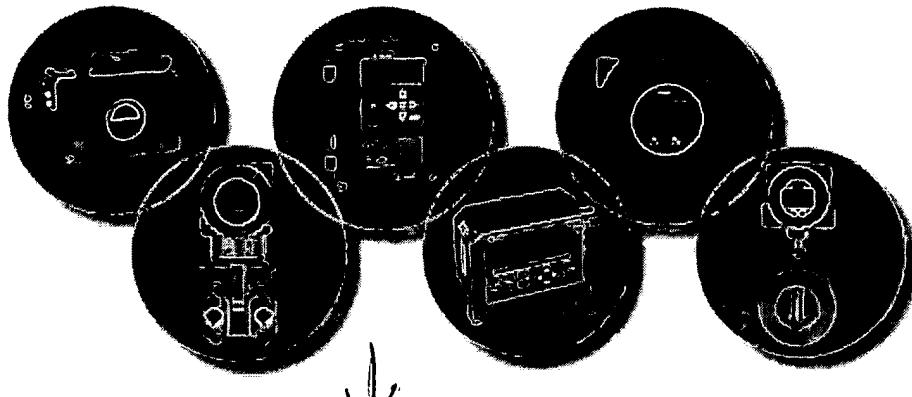
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Search our product index by either Model Number, or Keyword. Or, you can visit the Table of Contents to find products by category.

## Search By Model Number

Enter all or part of a Model Number and click "Submit Search". If no Model Number is entered, clicking "Submit Search" will generate a list of all available Model Numbers.

Enter Model Number:

Starts With  Exact Match  Contains

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Enter Search Expression:

## Search Expression Examples

Example	Finds
flushtype	Product pages containing the word "flushtype."
transmit, digital, signal	Product pages containing any one of the three words "transmit", "digital", or "signal".
differential pressure	Product pages containing the phrase "differential pressure."
remote <near> communications	Product pages containing the words "remote" and "communications" in close proximity to each other.
pressure and signal	Product pages containing both the words "pressure" and "signal."
pressure and (digital or signal)	Product pages containing the word "pressure" and either the word "digital" or the word "signal."
flow*	Product pages containing words such as "flow" and "flowmeter".



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*Foxboro Product Literature can be ordered free-of-charge by filling out this order form. Please enter the number of copies for each item you want. It takes approximately three weeks for the order to be filled.*

### I/A Series A<sup>2</sup> and Foxboro A<sup>2</sup> automation systems

Title	How Many?	Bulletin Number
<a href="#">Foxboro A<sup>2</sup> automation system</a>	<input type="text"/>	C535-1
<a href="#">Foxboro A<sup>2</sup> automation system T640 Micro-DCS</a>	<input type="text"/>	C535-9
<a href="#">I/A Series A<sup>2</sup> System Process Visualization Tools</a>	<input type="text"/>	C535-6
<a href="#">I/A Series A<sup>2</sup> System Process Engineering Tools</a>	<input type="text"/>	S-15
<a href="#">Evolution of the I/A Series to I/A Series A<sup>2</sup> system</a>	<input type="text"/>	W-11

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<a href="#">I/A Series System Migration</a>	<input type="text"/>	S-09A
<a href="#">I/A Series Control Suite</a>	<input type="text"/>	C-513
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<a href="#">I/A Series Information Suite</a>	<input type="text"/>	C-512
<a href="#">Intelligent Automation for gas processors</a>	<input type="text"/>	B67-30
<a href="#">Intelligent Power Grid</a>	<input type="text"/>	B-83

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<a href="#">Advantage Upgrade Program</a>	<input type="text"/>	C-514B
<a href="#">AQC Solution for TMP</a>	<input type="text"/>	B73-21
<a href="#">"Hotlinks" Magazine - Latest Edition</a>	<input type="text"/>	Hotlinks
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<b>Measurement &amp; Instruments Capability</b>	<input type="checkbox"/>	E40-5
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<b>CFT50 Digital Coriolis Mass Flowmeter</b>	<input type="checkbox"/>	E43-5
<b>Communicator Series 875 Intelligent Electrochemical Analyzer</b>	<input type="checkbox"/>	K54-21
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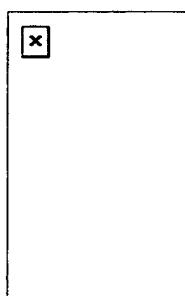
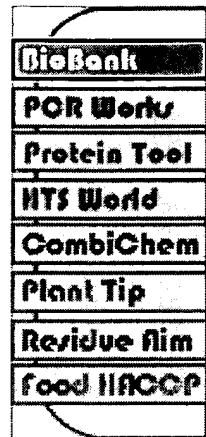
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- Analyzer, Chemical
- Analyzer, Flow Injection
- Analyzer, Organic Carbon
- Atomic Absorption Spectrometer, Flame
- Cell, Gas
- Cell, Optical
- Chromatography, Process Control Apparatus
- Conductivity Cell
- Conductivity Equipment
- Conductivity Meter
- Controller
- Detector, Carbon Dioxide
- Detector, Carbon Monoxide
- Detector, Hydrogen Sulfide
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- Electrode, Ion Specific
- Environmental Test Equipment
- Flow Controller & Indicator, Gas
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- Flow Meter, Gas
- Flow Meter, Liquid
- Gas Adsorption Apparatus
- Gas Analyzer
- Gas Chromatography, Detector
- Infrared Dispersive Spectrometer
- Liquid Chromatography, Detector
- Liquid-Level Controller
- Monitor, Laboratory
- pH Accessory



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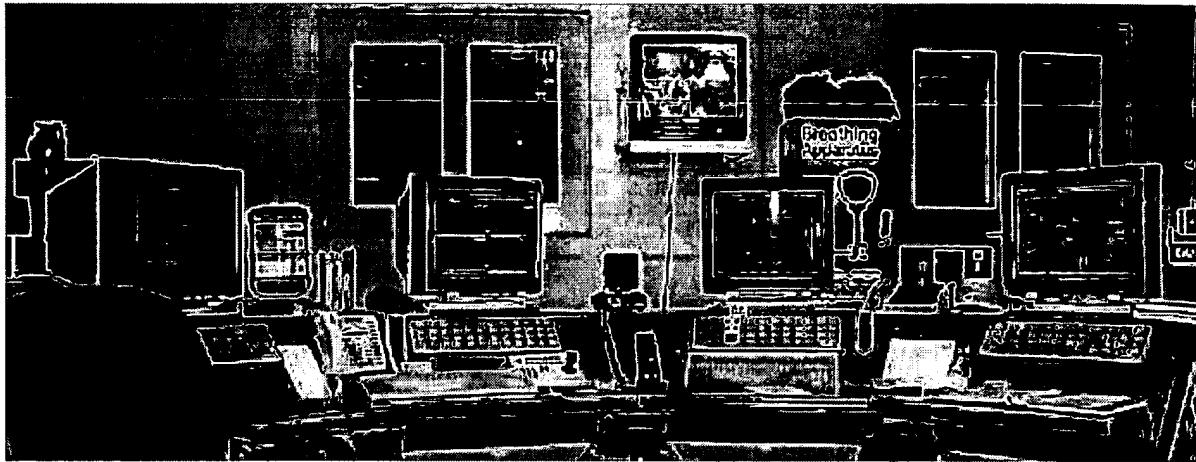
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- pH Controller
- pH Electrode
- pH Meter
- Pressure Controller
- Recorder, Chart
- Sampler, Liquid
- Spectrometer, Accessory
- Spectrophotometer Accessory
- Spectrophotometer, Cell
- Temperature Controller
- Water Pollution Analysis



Last Updat



## Scripts, tips and fixes for Foxboro's IA series DCS

**Programs, tools and resources for industrial process control using Foxboro's I/A series DCS. Specific examples from a large gold mill in interior Alaska.**

---

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- [Historian](#)
- [Helpful Hints](#)
- [Process control at this gold mill](#)
- [Links to other resources](#)
- [My personal home page](#)

My name is Kevin FitzGerrell. I've worked with Foxboro's I/A series DCS for a number of years. Until recently I worked at a large gold mill in interior Alaska. There I used a two node system, one node at the primary crushing plant, and the other at the main mill. The crusher node included a PW and an AB station, while the mill node consisted of an AW51B, a WP51B, 4 terminals (two of them PCs, one on Windows and the other on NT) and a fault tolerant CP30 pair with 18 FBMs and 5 AB stations. Recently I've moved to Auckland to work as a systems engineer for Foxboro New Zealand.

Over the years I've learned some things about working with Foxboro I/A systems that may be helpful to you. I've written a lot of small shell scripts and programs to help administer this system. I've got opinions on a variety of topics such as alarm management, control loop tuning, mill process control and other topics that I'll be presenting here as this site develops. For now, mostly I just have some administrative tools and some industry links. Follow the navigation links to the left to get around my site.

### **What's new:**

I've got an HTML viewer for ICC data in it's early stages. To try the viewer with some sample date use the following link. It will open the viewer in a new page. The popup ad is annoying, but it will let itself be closed after a short while. The default frame

Questions &  
Suggestions

sizes are good for my AW51B with screen resolution of 1152x900. If you are using a lower resolution and the data is not clear, just drag and drop the frame separators to better locations.

IA View

As of yet undocumented PERL code to process raw ICCPRT output is at:  
[doc.pl](#)

For some routines for working with the I/A (Legacy) Historian, see the "Historian" link to the left, or follow this link:

[Fun and games with the I/A series Historian.](#)

Although it's not particularly new anymore, I'm still getting together a "Foxboro Utilities" page for this web site. If you've got a favorite one feel free to email me [fitzgerrell@yahoo.com](mailto:fitzgerrell@yahoo.com) and tell me about it. On a fairly regular basis I've written a program or script only to find that Foxboro had already provided me with a utility that addresses my needs. Many of these utilities are not well referenced in the documentation.

**cpdup** -- One of the most convenient Foxboro utilities I've used recently is cpdup (in ver 4.3 and up). Foxboro apparently feels this utility needs more recognition, mentioning it in HH962. With this utility you can take a saveall diskette from one control station and make a saveall for another station. It uses a two column substitution list file you build, and whenever it locates a string from the first column on the saveall disk, it replaces it with the string from the second column. This makes it very easy to replicate an existing control scheme on a new control station -- just build your substitution list file with the compound names, block names, letterbugs, etc. Care must be taken in building the substitution list -- don't use any I/A block names, and remember that the substitution will be performed on all occurrences of original string (some substitutions may be unexpected). Because of the file format of the parameters file on saveall disks, traditional UNIX tools like grep, sed and vi weren't effective. In the past I've used PERL to make substitutions like this (particularly for binary files), but this new utility is handy. The utility is located at /opt/fox/bin/tools/ and documentation is in the file cpdup.man

**show\_win, pos\_win and move\_win** -- I've just recently used these to open and position iconified windows on a user's screen. Handy for de-iconifying the alarm manager (or any other DM) and moving it to the front. Also can be used with annunciators to make sure the screen called by an annuiciator key is not called behind another screen. These are in /usr/fox/wp/bin/tools. For info on pos\_win run "pos\_win -h", for info on move\_win run "move\_win -h", for info on move\_win, run with no parameters. In 4.3 and later versions you should find popup.sh in the same directory -- this is a Foxboro script that simplifies the use of these tools.

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S4	270	S2(3N) (MULTIVARIABLE? OR VARIABLE OR SELFTUN??? ? OR TUNE?? ? OR TUNING OR NONLINEAR OR LINEAR OR APPARATUS? OR APP?? ? - OR BIAS OR POINT)
S5	678	S2(3N) (INSTRUMENT? OR EQUIP? OR APPLIANCE? OR MECHANISM? OR UNIT OR UNITS OR ASSEMBL?)
S6	6	S1 AND S3:S5

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01647519 DOCUMENT TYPE: Product

**PRODUCT NAME: VP Link (647519)**

Cape Software Inc (626384)  
650 N Sam Houston Pkwy #313  
Houston, TX 77060 United States  
TELEPHONE: (281) 448-5177

RECORD TYPE: Directory

CONTACT: Sales Department

Cape Software's VP Link (TM) links **process** dynamics with offline **control systems**, which allows staff to write simulated inputs, read output values, and calculate process variables. VP Link connects with **control systems** before going online. **Control system** validation is handled before startups or during staging. After startups, the system can be used to meet management of change goals. VP Link is offered with operator console training, with trainees and instructors addressing malfunction scenarios. The training complies with OSHA 1910.119 recommendations. VP Link supports systems from Rockwell Automation, **Foxboro**, Honeywell, Moore, Fisher-Rosemount, Triconex, General Electric, Siemens, and other vendors.

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**6/7/2**

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00143872 DOCUMENT TYPE: Review

**PRODUCT NAMES: PID Tau (154709)**

**TITLE: Simulation on the road to optimization**  
**AUTHOR: Gerry, John Ruel, Michel**

SOURCE: Control Solutions, v75 n11 p35(3) Nov 2002  
ISSN: 1074-2328  
HOMEPAGE: <http://www.controlsolutionsmag.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

**Foxboro** 's/Invensys's PID Tau is an example of a controller algorithm that allows the user to apply a specific percentage of the controller gain to act on the setpoint. The user can therefore customize the setpoint response more. For instance, the user may be able to avoid overshoot and still reach setpoint faster. Another method for reaching smooth setpoint response can be filtering the setpoint with a lead-lag algorithm while using the Honeywell A algorithm. These are among methods of simulation that can help optimize plant control environments, eliminate waste, and enhance product quality. For instance, a large paper maker that had too much variability in the quality of paper produced found that cycling in stock preparation was the culprit. The mill changes paper grade frequently, which requires machine and pulp demand changes. When operators change the grade, they attempt to reduce the level in the reservoir to ensure there is as little as possible of the older grade pulp in the chest. Tuning tasks were somewhat intensive, and process required setpoint response with little overshoot. The solution chosen was to **control** the **process** with a Honeywell DCS that has a selection of algorithms available.

REVISION DATE: 20030430

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00136133 DOCUMENT TYPE: Review

PRODUCT NAMES: SCO UNIX (085073); Microsoft Windows NT (347973); Cybo CE Controller (085103)

TITLE: Easy AI? Artificial intelligence software is improving, but success..

AUTHOR: Hebert, Dan  
SOURCE: Control, v14 n11 p71(5) Nov 2001  
ISSN: 1049-5541  
HOMEPAGE: <http://www.controlmagazine.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

The communications components **Foxboro** I/A DCS and CyboCon CE Controller from CyboSoft are used for artificial intelligence applications. Some artificial intelligence products run on the same UNIX or Microsoft Windows NT machine or a soft logic controller, but most run on a computer that is separate from the main controller. Regardless, a low-cost and dependable communication protocol is needed between the AI code and the **control system**. High- level custom communication solutions are a high priority for many vendors, and some users buy AI software and the control program from the same vendor. For instance, a copper mine and processing facility uses **Foxboro** IA DCS and Connoisseur AI software to **control** a copper grinding **process**. Connoisseur is stored on PCs on an NT platform and talks to and

controls the process through a **Foxboro** I/A DCS. A UNIX- based **Foxboro** application workstation provides the interface from the NT platform to the I/A platform via EtherNet. Overall, vendors in the AI industry are meeting communications needs with the use of industry-standard protocols, including standard communications bridges (DDE-OPC). Another user deployed a CyboCon CE Controller from CyboSoft to enhance performance of a difficult pH control loop. Integration of AI software with installed systems is easier than before, and integration via OPC is more straightforward than custom driver development. However, software experts are still required to build OPC communication among software programs.

REVISION DATE: 20020930

**6/7/4**

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00103972            DOCUMENT TYPE: Review

PRODUCT NAMES: I/A Series Windows (488411); Modbus (681113)

TITLE: Colorado Springs Utilities Monitors and Controls Remote Water...  
AUTHOR: Staff  
SOURCE: Managing Automation, v12 n7 pS40(1) Jul 1997  
ISSN: 0089-3805  
HOMEPAGE: <http://www.managingautomation.com>

RECORD TYPE: Review

REVIEW TYPE: Product Analysis

GRADE: Product Analysis, No Rating

**Foxboro** Company's I/A Series and Modbus are used by Colorado Springs Utilities to control a remote water treatment plant with a **Foxboro** /Windows NT-based automation **system**. I/A Series **control** software, the Windows-based Modbus graphical operator interface package, alarming software, a real-time and historical trending package, and a reporting package are used. Modbus hardware/software allows communication with the remote water treatment plant's Modicon Programmable Logic Controller for data acquisition and supervisory control. CSU also installed an I/A Series WP70 workstation processor to make available a second operator workstation for the plant. The WP70 also offers the same operator interface functions as the AW70 application workstation used for the initial **Foxboro** system. The two I/A Series Windows NT personal computers are connected into a small LAN through **Foxboro**'s standard EtherNet connection. A second EtherNet port in the WP70 provides connections to CSU's city-wide WAN. CSU staff can securely track and control the remote plant using the WAN and commercial software that supports real-time dynamic emulation of the I/A Series operator displays from any networked computer. Operators in the remote location can monitor and control operations at CSU's other water treatment plants, which are controlled by UNIX I/A Series systems.

REVISION DATE: 20020930

**6/7/5**

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.  
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00103869            DOCUMENT TYPE: Review

**PRODUCT NAMES:** DeltaV (678601); I/A Series (488411); User Configurable Open System (UCOS) (678619); ControlLogix (678627)

**TITLE:** Distributed Control Systems Spread Out

**AUTHOR:** Piper, Peggy

**SOURCE:** Control, v10 n6 p37(3) Jun 1997

**ISSN:** 1049-5541

**HOME PAGE:** <http://www.controlmagazine.com>

**RECORD TYPE:** Review

**REVIEW TYPE:** Product Analysis

**GRADE:** Product Analysis, No Rating

**Distributed control system** (DCS) vendors are creating new systems to serve a wider market, making **automated control** possible in many more applications. Fisher-Rosemount offers a new, small-scale DCS, the DeltaV, which can be sized for each job and is less expensive for smaller applications with lower I/O counts. The system combines commercial technology with a tightly integrated system. **Foxboro**'s I/A Series takes the approach of designing a DCS with software that is independent of hardware. I/A Series is available unbundled, so the customer can use it on their own PC. **Control Systems** International's User Configurable Open System (UCOS) gives users the ability to customize their systems a great deal. UCOS is a software-only system, so users can choose the vendor with the least expensive I/O system or one that has the desired capabilities. **Standard Automation Control** Plus combines two major steps in **control system** development. Previously, a generic logic diagram was developed, then translated into a DCS configuration or PLC ladder logic by an integrator, and then testing began. Making changes to logic diagrams during testing was time-consuming and tedious. ControlPlus's logic set lets drawings be done in AutoCAD, and then translated directly into PLC executable code. Allen-Bradley's ControlLogix control architecture moves further into DCS, to deal with applications from just a few, to up to thousands of I/O points.

**REVISION DATE:** 20020930

**6/7/6**

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
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00100379                   **DOCUMENT TYPE:** Review

**PRODUCT NAMES:** IS-OilDownstream (652369); IS-OilUpstream (652351); R/3 (366366); Symphony (655627); PlantWeb (656194); I/A Series (488411)

**TITLE:** 10th Annual Control Market Outlook: Software taking control

**AUTHOR:** Hill, John A

**SOURCE:** InTech, v44 n1 p36(7) Jan 1997

**ISSN:** 0192-303X

**HOME PAGE:** <http://www.isa.org>

**RECORD TYPE:** Review

**REVIEW TYPE:** Product Analysis

**GRADE:** Product Analysis, No Rating

SAP AG's IS-OilDownStream, IS-OilUpstream, and R/3, Elsag Bailey's Symphony, Fisher-Rosemount's PlantWeb, and **Foxboro**'s IA Series are part

of a discussion of tools that link the factory floor with other parts of the enterprise. This tool category will guide much of 1997's development for such industries as chemicals, oil and gas, water/wastewater, metals and mining, and pulp/paper. Users will want more **field-based control systems** and intelligent **instruments**, and analog devices will fall off in popularity, particularly for new **process control systems**. Computerized hardware and software will see the fastest sales increase, and advanced **process control** will become more practical. The PC running Windows 95 or Windows NT will be the favored platform of the new **control** installations. Manufacturing execution **systems** (MESs) will integrate plant **control systems** with other enterprise computing systems. SAP's IS-Oil products will be a complete industry solution that enhances R/3 for the oil/gas industry's supply chain and will link crude supply to commercial and retail customers. Symphony, PlantWeb, and TotalPlant Solution, as well as Smar's products, will provide broader-based, more open management and **control systems**. Object-oriented technology will dominate to improve interoperability among automation hardware, and MES will evolve to become MESII, which will provide tracking and scheduling features enhanced with planning and inventory management abilities.

REVISION DATE: 20030130

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Set	Items	Description
S1	2190	FOXBORO
S2	6647639	CONTROL???? ?
S3	1532821	S2(3N) (PROCESS??? ? OR AUTOMAT? OR CONFIGUR? OR DEVICE? OR DISTRIBUT? OR SYSTEM? ? OR COORDINAT? OR CO()ORDINAT? OR INDU- STRIAL OR FIELD)
S4	263254	S2(3N) (MULTIVARIABLE? OR VARIABLE OR SELFTUN??? ? OR TUNE?? ? OR TUNING OR NONLINEAR OR LINEAR OR APPARATUS? OR APP?? ? - OR BIAS OR POINT)
S5	311663	S2(3N) (INSTRUMENT? OR EQUIP? OR APPLIANCE? OR MECHANISM? OR UNIT OR UNITS OR ASSEMBL?)
S6	391	S1 AND S3:S5
S7	358	S1 AND S3:S4
S8	358	S1 AND S3
S9	405490	S2(3N) PROCESS??? ?
S10	234	S6 AND S9
S11	61	S10/1999:2003
S12	173	S10 NOT S11
S13	152	RD (unique items)
S14	16	S13 AND (CONFIGUR? OR RECONFIGUR? OR SELFCONFIGUR? OR OBJE- CT? ? OR OBJECTORIENT? OR OO OR OOP?? ? OR OOF)
S15	75	S13 AND (SOFTWARE OR SOFT()WARE? ? OR PROGRAM? OR PREPROGR- AM? OR SUBPROGRAM? OR APPLICATION? OR APPS OR CODE? ? OR CODI- NG OR SOURCECODE? OR MICROCOD?)
S16	0	S13 AND (OOD OR OODB OR OODMS OR ODBMS OR OOL OR OOOS OR -

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17/7/1 (Item 1 from file: 2)  
DIALOG(R)File 2:INSPEC  
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6104248 INSPEC Abstract Number: B9901-8110B-058, C9901-7410B-083  
**Title: A full/partial stimulation simulator design based on Foxboro I/A hardware for SCE&G's Cope Station**  
Author(s): Gerber, N.; Greenlee, T.L.  
Author Affiliation: ESSCOR, Solana Beach, CA, USA  
Conference Title: Simulators International XIII. Proceedings of the 1996 Simulation Multiconference p.237-41  
Editor(s): Ades, M.; Griebenow, R.  
Publisher: SCS, San Diego, CA, USA  
Publication Date: 1996 Country of Publication: USA ix+290 pp.  
Material Identity Number: XX98-02442  
Conference Title: Proceedings of Simulators International XIII  
Conference Sponsor: SCS  
Conference Date: 8-11 April 1996 Conference Location: New Orleans, LA, USA  
Language: English Document Type: Conference Paper (PA)  
Treatment: General, Review (G)  
Abstract: Cope Station Unit 1 is a new 385 MW drum unit near Columbia, South Carolina. The unit is based on a coal-fired, natural circulation, single reheat type boiler built by Combustion Engineering. The turbine is a General Electric tandem-compound double-flow single reheat type. The new plant is to be operated by teams who will depend on a new CRT-based plant simulator as a means of initial unit familiarization. The simulator is being jointly funded by SCE&G and EPRI as part of a tailored collaboration project. In the past the term "full-stimulation" was used to describe a simulator where a process model stimulated both the DCS man-machine interface (operator station CRT) and the DCS **system controllers** (CP, DPU, MFP, etc.). The term "partial-stimulation" was used to describe a simulator where a process model stimulated only the DCS man-machine interface and a translator was used to represent the **control system software** that resides on the DCS **system controllers**. The Cope Station simulator is the first of a new type that is a mixture of both. The process model stimulates the **Foxboro I/A man-machine interface** and it stimulates the actual **Foxboro I/A control processor** (CP) **software** which is now resident on the master simulation workstation rather than the CP hardware. Because the CP **software** is no longer resident on its original host hardware, we say the CP are "virtual" or "soft". Because of the accuracy of this approach we term this a full-stimulation simulator based on "virtual CP". (0 Refs)  
Subfile: B C  
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17/7/2 (Item 2 from file: 2)  
DIALOG(R)File 2:INSPEC  
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6104225 INSPEC Abstract Number: B9901-8110B-055, C9901-7410B-081  
**Title: SCE&G Cope Station simulator training program development**  
Author(s): Stottlemire, J.L.; Fabry, R.  
Author Affiliation: Gen. Phys. Corp., Columbia, MD, USA  
Conference Title: Simulators International XIII. Proceedings of the 1996

Simulation Multiconference p.95-8  
Editor(s): Ades, M.; Griebenow, R.  
Publisher: SCS, San Diego, CA, USA  
Publication Date: 1996 Country of Publication: USA ix+290 pp.  
Material Identity Number: XX98-02442  
Conference Title: Proceedings of Simulators International XIII  
Conference Sponsor: SCS  
Conference Date: 8-11 April 1996 Conference Location: New Orleans, LA,  
USA

Language: English Document Type: Conference Paper (PA)  
Treatment: Applications (A); General, Review (G)  
Abstract: South Carolina Electric and Gas Company made a significant investment into meeting the needs of their customers in designing and building the new fossil generating station near Cope, South Carolina. Cope Station is a state-of-the-art, 385 MW plant, with equipment and design features that will provide the plant with the capabilities of achieving optimum availability and capability. SCE&G has also implemented a team concept approach to plant organization at Cope Station. The modern plant design, operating philosophy, and introduction of a large percentage of new operations personnel presented a tremendous challenge in preparing for plant commissioning and commercial operation. SCE&G's answer to this challenge was to hire an experienced operations trainer, and implement a comprehensive training **program**. An important part of the training investment was the procurement of a plant-specific control room simulator. SCE&G, through tailored collaboration with the Electric Power Research Institute (EPRI), developed a specification for a simulator with the features necessary for training the initial plant staff as well as advanced operator training. The high-fidelity CRT-based training simulator is a stimulated system that completely and accurately simulates the various plant systems, process startups, shutdowns, normal operating scenarios, and malfunctions. The process model stimulates a **Foxboro distributed control system** consisting of twelve **control processors**, five WP51 workstations, and one AW51 file server. (0 Refs)

Subfile: B C

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17/7/3 (Item 3 from file: 2)  
DIALOG(R)File 2:INSPEC  
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5116568 INSPEC Abstract Number: C9601-7480-003  
Title: How Foxboro Co. supports remote salesforce, plant operations  
Author(s): LeRoy, H.  
Author Affiliation: Foxboro Co., MA, USA  
Journal: I/S Analyzer vol.34, no.10 p.12-16  
Publication Date: Oct. 1995 Country of Publication: USA  
CODEN: ISANEL ISSN: 0896-3231  
Language: English Document Type: Journal Paper (JP)  
Treatment: Practical (P)  
Abstract: Discusses how **Foxboro** Co., a **process control** engineering firm, uses remote LAN access to provide centralized demos for its salesforce, as well as remote troubleshooting for its LAN-based process plant operations. Some issues it faced include: finding a solution that offers acceptable performance for graphics **applications**; implementing a secure solution palatable to upper management; creating a solution that can flexibly support a variety of needs, from one-to-one access to server-to-server connections. (0 Refs)

Subfile: C

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17/7/4 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

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4605297 INSPEC Abstract Number: C9404-3355-002

**Title:** Meet the CIM innovators

Author(s): Noaker, P.M.

Journal: Manufacturing Engineering vol.111, no.5 p.47-8, 50

Publication Date: Nov. 1993 Country of Publication: USA

CODEN: MAENDQ ISSN: 0361-0853

Language: English Document Type: Journal Paper (JP)

Treatment: Applications (A); Practical (P)

Abstract: Describes a successful CIM project and a CIM course. **Foxboro** a maker of **distributed process control systems**, set up a new system with entirely new equipment, using an open systems networking and computing architecture. The Manufacturing Education **Program** at the University of Illinois of Urbana-Champaign involves hands-on experience of various technologies, interaction with industry, and a project related to human interaction scheduling developed with the aid of members of the psychology department. An advanced laboratory is available. (0 Refs)

Subfile: C

17/7/5 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

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4513924 INSPEC Abstract Number: C9312-3350G-003

**Title:** Multivariable control of a crude unit in DCS

Author(s): Brown, M.W.; Treiber, S.

Author Affiliation: Treiber Controls Inc., Toronto, Ont., Canada

Conference Title: Proceedings of the 1993 International Control Engineering Conference p.221-31

Publisher: Reed Exhibition Companies, Stamford, CT, USA

Publication Date: 1993 Country of Publication: USA 284 pp.

Conference Sponsor: Control Eng.; Nat. Assoc. Manuf.; Fluid Controls Inst.; et al

Conference Date: 8-10 March 1993 Conference Location: Chicago, IL, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: Optimum Predictive Control (OPC), a **multivariable** predictive constraint **controller**, was applied to a crude unit atmospheric tower at Petro-Canada's Montreal Refinery. The controller was designed on a PC platform and transported onto a **FOXBORO** I/A DCS where it runs in the **FOXBORO** AP20 **applications** module. The crude unit **controller** has 7 manipulated variables, 2 feedforward variables, 7 controlled variables and 3 constraint variables. The broad objectives of the controller are to minimize the variability in the product specifications, to maximize the draws of the more valuable products and to ensure that the process operating constraints are not being violated. The OPC controller has dynamic models imbedded within the controller. These dynamic models are developed on a PC platform using the OPC design **software**. The OPC PC package consists of a collection of **programs** to develop dynamic input/output relationship models, to construct a controller and to simulate or test the controller performance against a multitude of real plant scenarios. (5 Refs)

Subfile: C

17/7/6 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

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04309829 INSPEC Abstract Number: B9302-7230-016, C9302-3240-003

**Title: Implications of digital communications on sensor validation**

Author(s): Henry, M.; Wood, G.

Issued by: Univ. Oxford, UK

Publication Date: 1992 Country of Publication: UK 12 pp.

Report Number: OUEL 1912/92

Language: English Document Type: Report (RP)

Treatment: Practical (P)

**Abstract:** Intelligent sensors and Fieldbus standards for their inter-communication are synergistic technologies that will greatly enhance process control systems of the future. Intelligence in sensors readily supports local sensor validation and Fieldbus enables timely communication using standard metrics and status values. Combined, they overcome some of the problems inherent in fault detection based on data from analogue sensors. The key features of the Fieldbus standard of relevance to sensor validation are described. Suitable validation metrics and status parameters are introduced and proposed for consideration within the Fieldbus standard in the application layer. Finally, a brief description is given of a demonstration system which performs online validation of **Foxboro**'s Coriolis Meter, and which generates the proposed metrics. (5 Refs)

Subfile: B C

17/7/7 (Item 7 from file: 2)

DIALOG(R)File 2:INSPEC

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04237058 INSPEC Abstract Number: C9210-7480-087

**Title: RBatch: recipe driven batch control package**

Author(s): Stapper, H.L.C.M.

Author Affiliation: Foxboro Nederland nv, Baarn, Netherlands

Journal: Journal A vol.33, no.1 p.78-80

Publication Date: March 1992 Country of Publication: Belgium

CODEN: JRNAAD ISSN: 0771-1107

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

**Abstract:** Describes the 'recipe driven batch control package' from **Foxboro** (RBatch). The philosophy of RBatch is based on a real 'Master-Slave' relation between the batch controller and the lower level sequence programs. The 'master' only relates to these sequence programs and is completely decoupled from the process input/output and control level; its only function is to book slaves (units) and activate functions (sequence programs) in those slaves. Activation of sequence programs is done according to a recipe. The sequence programs operate independently from the master. Once one or more sequence programs are activated, it is a task in the unit domain to supervise run conditions; in case exception situations occur, it is in this unit domain that corrective action is taken. (0 Refs)

Subfile: C

17/7/8 (Item 8 from file: 2)

DIALOG(R)File 2:INSPEC

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03944143 INSPEC Abstract Number: C91051775

**Title: Dynamic matrix control on benzene and toluene towers**

Author(s): Tran, D.; Cutler, C.

Author Affiliation: Sun Refining & Marketing Co., Toledo, OH, USA

Conference Title: Proceedings of the ISA/89 International Conference and Exhibit p.533-40

Publisher: ISA, Research Triangle Park, NC, USA

Publication Date: 1989 Country of Publication: USA 4 vol. 1687 pp.

U.S. Copyright Clearance Center Code: 0065-2814/89/533-540/\$0+.50pp

Conference Date: 22-26 Oct. 1989 Conference Location: Philadelphia, PA, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: Dynamic matrix control (DMC) was successfully implemented on the benzene and toluene towers at Sun's Toledo Refinery. More consistent product product purities were achieved, energy consumption was reduced, and there were fewer incidents of product downgrade. The (DMS) **applications** have been very reliable and received good acceptance from the unit operators. The **control** was implemented using the IBM-4361 **Process Control** Computer. The basic **instrumentation** system was the **Foxboro** Spec 200 electronic analog controllers. (0 Refs)

Subfile: C

17/7/9 (Item 9 from file: 2)

DIALOG(R)File 2:INSPEC

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03744587 INSPEC Abstract Number: C90072992

**Title: Bringing information to automation**

Author(s): Lareau, A.F.

Author Affiliation: J.M. Huber Corp., Macon, GA, USA

Journal: Control Engineering vol.37, no.7, suppl. p.22-3

Publication Date: June 1990 Country of Publication: USA

CODEN: CENGAX ISSN: 0010-8049

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: The Clay Division of J. M. Huber Corp. (Macon, Ga.), has integrated automation and information systems into a new operational matrix. At the Macon clay processing plant, Huber is implementing the **program** by consolidating and optimizing operations through a fully integrated I/A Series System from **Foxboro**. Huber selected the I/A Series because it provides the technological platform needed to integrate all areas of the facility and distribute information where it can be most effectively used. The I/A Series System is designed to match the flow of data through the plant. The heart of this **configuration** is what **Foxboro** calls open industrial system technology. By combining certain capabilities of data processing systems with a powerful set of continuous, batch, and **programmable** logic control functions, it brings various areas of the facility together through real-time data. (0 Refs)

Subfile: C

17/7/10 (Item 10 from file: 2)

DIALOG(R)File 2:INSPEC

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03744586 INSPEC Abstract Number: C90072991

**Title: The case for uncompromised performance for small applications**

Author(s): Epperly, A.

Author Affiliation: Foxboro Co., MA, USA  
Journal: Control Engineering vol.37, no.7, suppl. p.20-1  
Publication Date: June 1990 Country of Publication: USA  
CODEN: CENGAX ISSN: 0010-8049  
Language: English Document Type: Journal Paper (JP)  
Treatment: Practical (P)  
Abstract: Automation technology can now put many large system features into small systems. The author looks at the **Foxboro** I/A Series Systems, which is a personal workstation-based automation system that provides small **applications** with many of the capabilities found in large-scale systems.  
(0 Refs)  
Subfile: C

17/7/11 (Item 11 from file: 2)

DIALOG(R)File 2:INSPEC  
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03744584 INSPEC Abstract Number: C90068582  
**Title: Single-loop control provides a path to plantwide automation**  
Author(s): Savoy, L.  
Author Affiliation: Rollins Environ. Services Inc., Baton Rouge, LA, USA  
Journal: Control Engineering vol.37, no.7, suppl. p.14-15  
Publication Date: June 1990 Country of Publication: USA  
CODEN: CENGAX ISSN: 0010-8049  
Language: English Document Type: Journal Paper (JP)  
Treatment: Practical (P)  
Abstract: Rollins Environmental Services, Inc. (Baton Rouge, La.), a chemical waste-treatment firm, applies state-of-the-art information and control technology in a plantwide integrated system. The waste incineration facility achieves the ultra-high performance it needs using an integrated system based on single-loop analog control and plantwide information management. This **configuration** employs **Foxboro** 760 single-station controllers and a **Foxboro** I/A Series System distributed throughout the facility.  
(0 Refs)  
Subfile: C

17/7/12 (Item 12 from file: 2)

DIALOG(R)File 2:INSPEC  
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03485779 INSPEC Abstract Number: C89065868  
**Title: Pipe CIM into process plants for improved productivity**  
Author(s): Beaverstock, M.; Muck, R.F.  
Author Affiliation: Foxboro Co., MA, USA  
Journal: Automation vol.36, no.6 p.46-8  
Publication Date: June 1989 Country of Publication: USA  
CODEN: ATMNAU ISSN: 0146-1737  
Language: English Document Type: Journal Paper (JP)  
Treatment: Practical (P)  
Abstract: The approach for implementing CIM in a process plant differs from that used in a discrete-manufacturing facility. Because no two process plants are alike, each company needs a unique road map. The paper combines the expertise of Andersen Consulting, with its experience in CIM planning and implementation, and the direct **application** experience of The **Foxboro** Company to show that CIM can be implemented successfully in the process industries.  
(0 Refs)  
Subfile: C

17/7/13 (Item 13 from file: 2)

DIALOG(R)File 2:INSPEC

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03306856 INSPEC Abstract Number: B89011962, C89012161

**Title: Manufacture of reliable silicon pressure sensors using statistical process control**

Author(s): Sobol, J.

Author Affiliation: Foxboro/ICT, San Jose, CA, USA

Conference Title: Proceedings of Sensors Expo p.102C/1-5

Publisher: Helmers Publishing, Peterborough, NH, USA

Publication Date: 1988 Country of Publication: USA ii+207 pp.

Conference Sponsor: Sensors Magazine

Conference Date: 13-15 Sept. 1988 Conference Location: Chicago, IL, USA

Availability: Expocon Manage. Associates, Southport, CT, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: In order to respond to the demand for new and improved products, a tightly **controlled process** is necessary. **Foxboro /ICT**, as a maker of high-reliability sensors, uses a comprehensive statistical **process control program** which allows the **Foxboro /ICT** technology to be competitive in the piezoresistive pressure sensor market by providing high-performance sensors at lower costs. (0 Refs)

Subfile: B C

17/7/14 (Item 14 from file: 2)

DIALOG(R)File 2:INSPEC

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03266364 INSPEC Abstract Number: C89001058

**Title: A critical performance evaluation of four single loop self tuning control products**

Author(s): Kaya, A.; Titus, S.

Author Affiliation: Ind. Control & Instrum. Lab., Akron Univ., OH, USA

Conference Title: Proceedings of the 1988 American Control Conference p.1659-64 vol.2

Publisher: American Autom. Control Council, Green Valley, AZ, USA

Publication Date: 1988 Country of Publication: USA 3 vol. 2503 pp.

Conference Sponsor: American Autom. Control Council

Conference Date: 15-17 June 1988 Conference Location: Atlanta, GA, USA

Availability: IEEE, Piscataway, NJ, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: Four low-cost single-loop self- tuning **controls** are evaluated. They are manufactured by Bailey, **Foxboro**, Turnbull, and L&N under the trade names of 'LOOP COMMAND', 'EXACT', 'AUTOTUNER', and 'ELECTROMAX V+', respectively. The products are examined for: (i) set point change which occurs in a cascade loop, (ii) disturbance rejection which is common in **process control** loops, and (iii) measurement noise which may be confused with measured process value. The process used was of high order and different time delays with a ratio of time delay/dominant time constant to be between 0.1 and 5. Each unit is examined and its performance compared with the specifications stated in its product literature. The author's main purpose is to inform and guide potential users. The performance of each product is described and evaluated for its expected use in various **applications**. The performance results are selectively presented in graphical form. (1 Refs)

Subfile: C

17/7/15 (Item 15 from file: 2)  
DIALOG(R)File 2:INSPEC  
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03207516 INSPEC Abstract Number: C88050466  
**Title:** Multivariable control of industrial **fractionators**  
Author(s): Shakouri, A.  
Author Affiliation: Koninklijke/Shell-Lab., Amsterdam, Netherlands  
Conference Title: Dynamics and Control of Chemical Reactors and  
Distillation Columns. Selected Papers from the IFAC Symposium p.49-54  
Editor(s): McGreavy, C.  
Publisher: Pergamon, Oxford, UK  
Publication Date: 1988 Country of Publication: UK ix+330 pp.  
ISBN: 0 08 034917 X  
Conference Sponsor: IFAC; Eur. Federation Chem. Eng.; Inst. Chem. Eng  
Conference Date: 8-10 Dec. 1986 Conference Location: Bournemouth, UK  
Language: English Document Type: Conference Paper (PA)  
Treatment: Applications (A)  
Abstract: The multivariable Nyquist array method offers a concept which  
enables the classical single-input/single-output Nyquist control design  
methods to be extended to multivariable systems. This concept is based on  
partial decoupling using a compensator network to achieve what is known as  
a 'diagonal-dominant' structure, whereby single-loop controllers can be  
designed independently for the different loops. The method described here  
offers an approach by which a compensator network is designed  
automatically, a function minimization algorithm being used to obtain  
dominance over a specified frequency range by minimizing the ratio of  
moduli of the off-diagonal terms to the diagonal terms of the appropriate  
open-loop transfer matrix. Once a suitable compensator has been found, the  
design of an overall **control system** is completed by designing  
single-loop controllers for the different loops separately. The  
applicability of the method is demonstrated, with the aid of a dynamic  
model of a high-vacuum distillation unit, by the design of the viscosity  
**control configuration** for that **unit**. Further, attention has been paid  
to incorporating such a **control configuration** into modern, **distributed**  
**- control systems** such as **Foxboro Spectrum**. (10 Refs)

Subfile: C

17/7/16 (Item 16 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

03022156 INSPEC Abstract Number: C88004668  
**Title:** Distributed **intelligence** in process control  
Author(s): Berry, D.  
Journal: Control Engineering vol.34, no.5 p.62-4  
Publication Date: May 1987 Country of Publication: USA  
CODEN: CENGAX ISSN: 0010-8049  
Language: English Document Type: Journal Paper (JP)  
Treatment: Practical (P)  
Abstract: **Foxboro** Company has announced the Intelligent Automation  
Series, a system of hardware, **software**, **applications**, and services  
designed for distributed intelligence in **industrial process control**.  
The product line is offered as a **control**, information, and measurement  
**systems** package, that features open communication architecture,  
environmentally hardened hardware, hardware independent **software**, and

online reconfiguration . A distributed global database allows each function with the manufacturing organization to develop an applications window of pertinent information for plant management and control. (0 Refs)

Subfile: C

17/7/17 (Item 17 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

03003903 INSPEC Abstract Number: C87065397

**Title: I/A series distributes intelligence where its needed**

Author(s): Cleaveland, P.

Journal: I & CS - The Industrial and Process Control Magazine vol.60, no.6 p.58-9

Publication Date: June 1987 Country of Publication: USA

CODEN: CHISDY ISSN: 0746-2395

U.S. Copyright Clearance Center Code: 0746-2395/87/\$1.00+.25

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P); Product Review (R)

Abstract: The **Foxboro** Company's new Intelligent Automation Series includes advanced control hardware, software , applications , and support services for process control , applications . Engineered to distribute intelligence wherever it is needed in a process plant, I/A Series Systems are designed around an open communications architecture that's compatible with MAP standards. The systems feature modular hardware and an extensive selection of application software , and allow integration with other vendors' products. (0 Refs)

Subfile: C

17/7/18 (Item 18 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

02781497 INSPEC Abstract Number: C87001170

**Title: Adaptive controller simulated process results: Foxboro EXACT and ASEA Novatune**

Author(s): Nachtingal, C.L.

Author Affiliation: Kistler-Morse Corp.

Conference Title: Proceedings of the 1986 American Control Conference (Cat. No.86CH2336-6) p.1434-9 vol.3

Publisher: IEEE, New York, NY, USA

Publication Date: 1986 Country of Publication: USA 3 vol. 2136 pp.

Conference Sponsor: American Autom. Control Council

Conference Date: 18-20 June 1986 Conference Location: Seattle, WA, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: Mill test results are essential for demonstrating the control capability of adaptive controllers. However, it is difficult, if not impossible, to test two different controllers under exactly identical mill process conditions. Simulations of a few generic processes added substantially to the understanding of how the **Foxboro** EXACT and the ASEA controllers work. Three models were used: (1) a linear analog third-order model; (2) a nonlinear digital model, as exhibited by a tank outflow orifice restriction; and (3) a linear digital fifth-order model with long time delay. The digital simulations were synthesized on an IBM-compatible personal computer. (0 Refs)

Subfile: C

17/7/19 (Item 19 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

02781496 INSPEC Abstract Number: C87001169

**Title: Adaptive controller performance evaluation: Foxboro EXACT and ASEA Novatune**

Author(s): Nachtigal, C.L.

Author Affiliation: Kistler-Morse Corp.

Conference Title: Proceedings of the 1986 American Control Conference (Cat. No.86CH2336-6) p.1428-33 vol.3

Publisher: IEEE, New York, NY, USA

Publication Date: 1986 Country of Publication: USA 3 vol. 2136 pp.

Conference Sponsor: American Autom. Control Council

Conference Date: 18-20 June 1986 Conference Location: Seattle, WA, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Applications (A); Practical (P)

Abstract: Two recently commercialized adaptive self-tuning controllers, the **Foxboro EXACT** and the **ASEA Novatune** are evaluated. Tests were performed in pulp and paper mill processes. The **Foxboro EXACT** demonstrated a performance improvement on a recovery-boiler specific-gravity control loop and on a paper machine pH loop. It is clear that it is the addition of adaptive derivative control to adaptive PI control that caused a substantial increase in performance. The **ASEA Novatune** adaptive feedforward feature was found to add to performance improvements over adaptive feedback control alone. In addition to mill tests, both controllers were tested with two different real-time process simulations. These were: (1) a digital, nonlinear second-order model; (2) a digital, fifth-order linear model with time delay. These digital simulations were implemented with an IBM-compatible personal computer. The pluses and minuses of each controller are listed in conclusion. (11 Refs)

Subfile: C

17/7/20 (Item 20 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

02640518 INSPEC Abstract Number: C86022243

**Title: Self-tuning PID controllers based on microprocessors**

Author(s): Radke, F.

Author Affiliation: VDO Mess- und Regeltech. GmbH, Hannover, West Germany

Journal: Automatisierungstechnische Praxis vol.28, no.1 p.5-12

Publication Date: 1986 Country of Publication: West Germany

CODEN: ARTPER ISSN: 0178-2320

Language: German Document Type: Journal Paper (JP)

Treatment: Applications (A); Practical (P)

Abstract: Principles of industrially applied self-tuning control systems using microcomputers in conjunction with system reference models, and technological aspects of particular examples, are described. The Leeds and Northrup ELEKTROMAX V PID controller uses a 2nd order process control model with dead time, and the **Foxboro** controller EXACT combines a heuristic approach with a modified Ziegler-Nichols tuning method. The **ASEA** minimal variance adaptive regulator NOVATUNE for machine and process control operates with the STAR software module. The Bailey Controls NETWORK 90 process control system uses the adaptive Smith predictor. The small process control MDC 60 system controls several systems via process stations. Comparisons of methods used and future

developments are discussed. (16 Refs)

Subfile: C

17/7/21 (Item 21 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

02441308 INSPEC Abstract Number: C85022914

**Title: Effects of sampling in digital control**

Journal: Regulacion y Mando Automatico vol.18, no.144 p.71-2

Publication Date: Dec. 1984 Country of Publication: Spain

CODEN: RMAUDU ISSN: 0040-1722

Language: Spanish Document Type: Journal Paper (JP)

Treatment: Practical (P); Theoretical (T)

Abstract: There is a requirement for sampling the signals entering the control loop in digital controllers which are increasingly used in **process control applications**. This article looks at a study carried out by **Foxboro** : 'microprocessor simulation reveals control sampling differences' which demonstrates that sampling periods of less than 0.5 s are not necessary even in rapid processes in order to obtain effective control. (1 Refs)

Subfile: C

17/7/22 (Item 22 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

02337437 INSPEC Abstract Number: C84048993

**Title: Engineering design methods used for distributed control system application**

Author(s): Kurjatko, I.; Krutein, H.

Author Affiliation: Lurgi Corp., Belmont, CA, USA

Conference Title: Advances in Instrumentation. Vol.38, Part 2.

Proceedings of the ISA International Conference and Exhibit p.1073-81

Publisher: ISA, Research Triangle Park, NC, USA

Publication Date: 1983 Country of Publication: USA 774 pp.

ISBN: 0 87664 781 6

U.S. Copyright Clearance Center Code: 0 87664 781 6/83/1073-9/\$0+.50PP

Conference Date: 10-13 Oct. 1983 Conference Location: Houston, TX, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: The paper discusses the design methods used by the instrumentation design engineer when the **distributed control system** (DCS) is chosen to **control** and monitor **process** variables in the industrial plant. It shows the different methods of communication used to help the client and vendor understand the concept of applied control strategies. The experience necessary for the instrumentation design engineer using the DCS is presented and some possibilities to achieve this required knowledge are explored. Specific examples are given for the **Foxboro** Spectrum III application. (7 Refs)

Subfile: C

17/7/23 (Item 23 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

02318343 INSPEC Abstract Number: C84042780

**Title:** Configuration of complex controls in process control systems

Author(s): Eckelmann, W.; Hofmann, W.; Schlingmann, H.

Author Affiliation: Hoechst AG, Frankfurt am Main, West Germany

Journal: Regelungstechnische Praxis vol.26, no.5 p.210-19

Publication Date: May 1984 Country of Publication: West Germany

CODEN: RGPXAZ ISSN: 0340-4730

Language: German Document Type: Journal Paper (JP)

Treatment: General, Review (G)

**Abstract:** Evaluation of firmware for modern **process control systems** is difficult because of the increasing use of complex control techniques, and no ideal system exists, each one having its weaknesses as well as its strengths. It therefore has to be resolved on a project basis. In order to make a comparison, three small examples were chosen, having no 'exotica' but complex enough to bring out the differences in operation. The examples consist of cascade control, multiplexing and selection control. The meaning of these terms is first discussed. Seven different commercial solutions from various manufacturers are described. These are based upon the Eckardt System PLS80, Fischer & Porter DCI 4000, **Foxboro** Microspec 2, Hartmann & Braun Contronic P, Honeywell Kernregler 2, Siemens AS 220 and VDO Micon. A detailed comparison of the solutions is made, the differences being more marked than in simple **control systems**. (2 Refs)

Subfile: C

17/7/24 (Item 24 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

02060834 INSPEC Abstract Number: C83023258

**Title:** Setting reliability goals for process control instrumentation

Author(s): Rooney, J.P.

Author Affiliation: Foxboro Co., Foxboro, MA, USA

Journal: Control Engineering vol.30, no.2 p.94-6

Publication Date: Feb. 1983 Country of Publication: USA

CODEN: CENGAX ISSN: 0010-8049

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

**Abstract:** With military organizations and federal agencies such as NASA, reliability requirements are often stated as explicit contractual clauses, which the instrument engineer then has the obvious (but considerable) task of achieving. In **process control**, however, since reliability requirements are seldom stated in terms of mission success or duration, reliability goals must be determined by the control engineer. The author presents simple reliability goal-setting techniques which can be used to begin the iterative process of defining and redefining reliability goals. Some pitfalls from the too-literal **application** of mathematical techniques are explored. Examples of user concerns are given based upon a survey commissioned by the **Foxboro** Co. By comparing goals with experience, sometimes with the help of the **instrument** manufacturer, the **control** engineer can determine whether or not the goals can be achieved. (5 Refs)

Subfile: C

17/7/25 (Item 25 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

02046144 INSPEC Abstract Number: C83020459

**Title:** Isa automatic control systems development

Author(s): Manlapig, E.V.  
Author Affiliation: Mount Isa Mines Ltd., Qld., Australia  
Conference Title: Second Conference on Control Engineering 1982 p.  
67-72  
Publisher: Instn. Eng. Australia, Barton, ACT, Australia  
Publication Date: 1982 Country of Publication: Australia 239 pp.  
Conference Date: 25-27 Aug. 1982 Conference Location: Newcastle, NSW,  
Australia  
Medium: Microfiche  
Language: English Document Type: Conference Paper (PA)  
Treatment: Practical (P)  
Abstract: The Isa **Automatic Control System** is a **process control software** package developed at Mount Isa Mines Limited for application in all but very large metallurgical or chemical processes (greater than 5000 points). The **software** has been developed for use in Hewlett Packard 1000 E or F series computers operating under RTE IVB or 6 VM environment. This package is now used at the lead/zinc concentrator where the HP computer is interfaced to **Foxboro** Interspec/Spec 200 and Honeywell TDC 2000 front-ends. The **software** is used to control crushing, grinding, flotation and tailings disposal. The **software** package is currently being installed at the copper concentrator where it will control crushing, grinding and flotation. Three other immediate **applications** are planned at Isamine. In this paper, the development of **process control systems** at Mount Isa Mines is outlined. The creation of the **process control package** is described and the reasons for its development highlighted. The **application** of the **software** and the implementation of **process control systems** at the lead/zinc concentrator is detailed. (4 Refs)  
Subfile: C

17/7/26 (Item 26 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.  
01861637 INSPEC Abstract Number: C82021817  
Title: Programmable distributed control systems in the chemical industry  
Author(s): Kleinberger, S.  
Author Affiliation: Afcon Control & Automation, Tel-Aviv, Israel  
Conference Title: Electrotechnology for Development. Proceedings of MELECON '81 the First Mediterranean Electrotechnical Conference p.  
9.3.3/1-3  
Publisher: IEEE, New York, NY, USA  
Publication Date: 1981 Country of Publication: USA 522 pp.  
Conference Date: 24-28 May 1981 Conference Location: Tel Aviv, Israel  
Language: English Document Type: Conference Paper (PA)  
Treatment: Applications (A); Practical (P)  
Abstract: Considers the benefits of using a **distributed** structure for **control systems**. An example of recently applied system is given, to show the evident priorities of the distributed scheme for the medium and large capacity systems. The example presented is based on a complete computer-based **control system** which was recently supplied as turn-key project to a major chemical-plants complex in Israel. Main equipment units comprising the system are manufactured by The **Foxboro** Co. and Gould Modicon Inc. (0 Refs)  
Subfile: C

17/7/27 (Item 27 from file: 2)  
DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

01696764 INSPEC Abstract Number: C81018471  
**Title:** On-line computers in the process industry. VIII. Reliability and safety  
Author(s): Roffel, B.; de Groot, H.J.  
Author Affiliation: Tech. Hogeschool Twente , Twente, Netherlands  
Journal: Polytechnisch Tijdschrift Procestechniek vol.36, no.3 p. 160-5  
Publication Date: March 1981 Country of Publication: Netherlands  
CODEN: PTPTBP ISSN: 0032-4094  
Language: Dutch Document Type: Journal Paper (JP)  
Treatment: Practical (P)  
Abstract: For pt.VII see ibid., vol.36, no.2 (1981). Discusses factors affecting reliability and safety of computer systems in the process industries. A mathematical analysis for the determination of the mean repair time, mean time between failures and availability percentage is presented and these parameters are tabulated for 28 **Foxboro**, Honeywell, Dietz, Kent, and Siemens computers working in various industries. The percentage susceptibility to failure of various computer components is also tabulated ( **programs** account for 15% of total defects, 22% of faults). (9 Refs)  
Subfile: C

17/7/28 (Item 28 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

01333186 INSPEC Abstract Number: C79011815  
**Title:** A combined readout and instruction system for process controllers  
Author(s): Amable Gonzalez, J.  
Journal: Tecnica de la Regulacion y Mando Automatico vol.11, no.82 p.47-64  
Publication Date: Oct. 1978 Country of Publication: Spain  
CODEN: TRAUBH ISSN: 0040-1722  
Language: Spanish Document Type: Journal Paper (JP)  
Treatment: General, Review (G)  
Abstract: Because the method of combining the readout and instruction sections of **process controllers** has decided advantages, this article describes in detail the **Foxboro** VIDEOSPEC system which uses RAM in conjunction with various types of modules to provide a single CRT display on which the operator by means of a keyboard can select the process he requires to monitor and, in the event of a fault, can set the faulty section to manual operation until the elimination of the fault. The system **configuration**, the task of the operator, the information structure of the system, the operator's console and the safety of the system are discussed in detail. (4 Refs)  
Subfile: C

17/7/29 (Item 29 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

012223872 INSPEC Abstract Number: C78019770  
**Title:** Application of a process computer to the control and regulation of a complex batch chemical production plant  
Author(s): Vickers, F.P.

Journal: Regelungstechnische Praxis vol.20, no.4 p.121-7  
Publication Date: April 1978 Country of Publication: West Germany  
CODEN: RGPXAZ ISSN: 0340-4730  
Language: German Document Type: Journal Paper (JP)  
Treatment: Practical (P)  
Abstract: Describes the **automatic control** (Foxboro -Yoxall) of the batch-production of BRUFEN in Nottingham, England. The plant, which is in duplicate, consists of 26 reaction vessels, in which the reaction time varies from 12 to 27 hours. (0 Refs)  
Subfile: C

17/7/30 (Item 30 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.  
01078138 INSPEC Abstract Number: C77017703  
**Title: The installation of a process computer in a synthetics production plant**  
Author(s): Weber, H.  
Journal: Regelungstechnische Praxis vol.19, no.2 p.49-55  
Publication Date: Feb. 1977 Country of Publication: West Germany  
CODEN: RGPXAZ ISSN: 0340-4730  
Language: German Document Type: Journal Paper (JP)  
Treatment: Applications (A)  
Abstract: Gives full details of a dual computer system installed by VEBA-CHEMIE AG (Germany) for **process** monitoring, **control** and regulation of a 100000 ton/year polyolefine production plant. A schematic diagram shows the Type **Foxboro** PCP 88 dual computer system which was adopted and which comprises two central units interconnected by a communications module. Each unit has a 16 k core memory. The primary (**control**) unit has a 200 k bulk store while the second (supervisory) unit disposes of a 400 k store. The **configuration** provides for 293 analogue inputs, 542 digital outputs, 4 analogue outputs, 40 control outputs and 820 digital inputs and the system is hierarchically organized. A check module provides for interchange of duties between the two central units in the event of failure of the primary unit. The setting-up of the requirements for automation of the plant, the technical solutions with respect to equipment, and the realized information system together with operational experience are described. Comparison with an older, conventionally designed plastics production plant is made. (0 Refs)  
Subfile: C

17/7/31 (Item 31 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.  
00772817 INSPEC Abstract Number: C75014757  
**Title: Development of the control system for the Jeffrey Mine's asbestos processing complex**  
Author(s): Berger, H.  
Author Affiliation: Johns-Manville Co. Ltd., Asbestos, Que., Canada  
Journal: Canadian Mining and Metallurgical Bulletin vol.68, no.754  
p.52-9  
Publication Date: Feb. 1975 Country of Publication: Canada  
CODEN: CIBUBA ISSN: 0317-0926  
Language: English Document Type: Journal Paper (JP)  
Treatment: Applications (A)  
Abstract: With the objective of determining the benefits of **automatic**

**process control** , experiments were carried out, using analogue instrumentation, on a 60-tph parallel-flow rotary dryer. During the same time, other ideas were investigated, a very important one being a **programming** system for starting the multitude of motors associated with an asbestos milling operation. Many of the ideas, although greatly modified, were finally incorporated into the design of the new crushing-drying-concentrating complex. A proposal for using a digital **process control** computer was given to a feasibility study group. The final recommendation was to purchase a **Foxboro** 402 computer system. (0 Refs)

Subfile: C

17/7/32 (Item 32 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

00735507 INSPEC Abstract Number: C75006444  
**Title:** Start-up of world's largest Verti-Forma with an advanced process control system  
**Author(s):** McLean, M.  
**Author Affiliation:** Great Northern Paper Co., Millinocket, ME, USA  
**Conference Title:** Instrumentation in the Pulp and Paper Industry. vol.14 p.9-11  
**Publisher:** ISA, Pittsburgh, PA, USA  
**Publication Date:** 1973 **Country of Publication:** USA vii+187 pp.  
**ISBN:** 0 87664 219 9  
**Conference Sponsor:** ISA; Canadian Pulp and Paper Assoc  
**Conference Date:** 2-5 April 1973 **Conference Location:** Montreal, Que., Canada  
**Language:** English **Document Type:** Conference Paper (PA)  
**Treatment:** Practical (P)  
**Abstract:** This paper describes the 318 inch Black Clawson Verti-Forma installed in the Great Northern Paper Company's Millinocket Mill, together with the associated wet end auxiliary equipment. Also described is the Advanced Process Control System which includes a **Foxboro** PCP-88 Computer. The original objectives, planning and operator training are discussed. (0 Refs)

Subfile: C

17/7/33 (Item 33 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

00726877 INSPEC Abstract Number: C75004830  
**Title:** FPL, a program language for the computer amateur (process control)  
**Author(s):** Thane, H.W.  
**Journal:** Regelungstechnische Praxis vol.16, no.12 p.329-30  
**Publication Date:** Dec. 1974 **Country of Publication:** West Germany  
**CODEN:** RGPXAZ **ISSN:** 0340-4730  
**Language:** German **Document Type:** Journal Paper (JP)  
**Treatment:** New Developments (N)  
**Abstract:** Describes the **Foxboro** Process Language introduced by **Foxboro** for their FOX 2/10 mini-process-computer system. Starting from BASIC it provides an easily-learned, flexible and mistake-proof system by which **process control programs** can be written by the non-expert. (0 Refs)

Subfile: C

17/7/34 (Item 34 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

00408702 INSPEC Abstract Number: C72015751

**Title: A process control system to minimize costs**

Journal: Process Instrumentation vol.1, no.2 p.97, 110

Publication Date: May 1972 Country of Publication: UK

CODEN: PRSIBR ISSN: 0370-1654

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: This article briefly describes **Foxboro** -Yoxall's recently announced SPEC 200 and FOX 2 computer based **system** for **process control** and plant monitoring, both of which are designed to minimize the problem of maintenance and service costs.

Subfile: C

17/7/35 (Item 35 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

00408694 INSPEC Abstract Number: C72015742

**Title: How Foxboro deals with the control of discontinuous processes using the process computer**

Author(s): Neve, B.N.; Ghiglia, G.C.

Journal: Automazione e Strumentazione vol.20, no.1 p.21-34

Publication Date: Jan. 1972 Country of Publication: Italy

CODEN: ATSZAS ISSN: 0005-1284

Language: Italian Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: This article explains how **Foxboro** digital computer systems can be applied to the **control** of discontinuous **processes**. Differences between conventional manual **control** of batch **processes** and **process computer control** are clarified with the aid of analogies. Then follows a description of advantages of an extensive 'table driven' **software** approach. Lastly an abbreviated description of the most important commands of **Foxboro** high level Batch language is given together with a small **programming** example.

Subfile: C

17/7/36 (Item 36 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

00385066 INSPEC Abstract Number: C72011336

**Title: The continuous digester control system at Pontiac Division, Consolidated-Bathurst Ltd**

Author(s): Battershill, J.W.T.

Conference Title: 58th annual meeting 1972 of the technical section, Canadian Pulp and Paper Association p.357-77

Publisher: Canadian Pulp and Paper Assoc, Montreal, Que., Canada

Publication Date: 1972 Country of Publication: Canada 399 pp.

Conference Sponsor: Canadian Pulp and Paper Assoc

Conference Date: 25-28 Jan. 1972 Conference Location: Montreal, Que., Canada

Language: English Document Type: Conference Paper (PA)

Treatment: Applications (A); Practical (P)

**Abstract:** A project was undertaken to improve **process control** on the continuous digester at Pontiac Division - Consolidated-Bathurst Limited. A **Foxboro** System 402 computer was installed. CBL developed the **application programs** and carried out all phases of the development engineering for the **control system**. The results of the project show a substantial decrease in KNo variability, an increased KNo average and an increased production rate. The project was completed ahead of time and under budget, using a minimum of personnel. Acceptance of the **control system** by the **process** operators has been excellent. The **control system** is heavily oriented towards mathematical modelling, simulation, process testing and the maximum use of feedback **controllers**. The **process** operator has full **control** over the use of computer functions to assist him in his job of producing uniformly cooked pulp at a high production rate. The digester cooks both softwood and hardwood.

Subfile: C

17/7/37 (Item 37 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

00024243 INSPEC Abstract Number: C69003619  
**Title:** A new approach to communication software  
**Author(s):** Bristol, E.H.; Mahoney, G.E.  
**Journal:** IEEE Transactions on Industrial Electronics and Control  
Instrumentation vol.IECI-15, no.2 p.64-7  
**Publication Date:** Dec. 1968 **Country of Publication:** USA  
**CODEN:** IICIAA **ISSN:** 0018-9421  
**Language:** English **Document Type:** Journal Paper (JP)  
**Abstract:** The arguments for the necessity for the coexistence in the **process** control programming environment of both procedure-oriented languages like FORTRAN and problem-oriented languages like the **Foxboro** Company's LAM are presented. An example is given of how these different kinds of languages complement each other in use.

Subfile: C

17/7/38 (Item 1 from file: 6)  
DIALOG(R)File 6:NTIS  
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1559236 NTIS Accession Number: AD-A228 479/2  
**STARS Structure (DOD AAS IOM Document Version 1.3) for the Software Technology for Adaptable, Reliable Systems (STARS) Program (Final rept)**  
Ett, W. H.  
IBM Federal Sector Div., Gaithersburg, MD.  
Corp. Source Codes: 099327000; 422280  
11 May 90 284p  
**Languages:** English  
**Journal Announcement:** GRAI9109  
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703) 605-6000 (other countries); fax at (703) 321-8547; and email at [orders@ntis.fedworld.gov](mailto:orders@ntis.fedworld.gov). NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.  
**NTIS Prices:** PC A13/MF A02  
**Country of Publication:** United States  
**Contract No.:** F19628-88-D-0032  
**Information Object Modeling** is a technique for developing specification models for systems. The techniques for building **Information Object Models**

were adapted from techniques of real-time structured analysis and the **Foxboro** company's experience in specifying and developing real-time **process control systems**. An information **object** Model (IOM) is organized to provide levels of information for different audiences, so that one document can meet the needs of different people. A mission statement is provided which describes the scope of the system. An overview of the system describes the major functional **objects**. Finally, each functional **object** is discussed in detail. The modeling techniques for an IOM use the graphical techniques real-time structured analysis, including transformation diagrams (data flow plus control flow), state transition diagrams, and entity relationship diagrams. Transformation diagrams, however, are applied in a different manner, representing the communication of **objects** organized hierarchically rather than a functional decomposition of processes. This document describes a specification model for an air traffic **control system** prepared using Real Time Structured Analysis. It shows **Foxboro**'s concept of specification packaging and can serve as an alternative to MIL-STD-2167A. Keywords: Stars ( **Software** Technology for Adaptable Reliable System), Weather surveillance, Aircraft and track management. (kr)

17/7/39 (Item 2 from file: 6)

DIALOG(R)File 6:NTIS

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1559234 NTIS Accession Number: AD-A228 477/6

Information Object Modeling Methodology for the Software Technology for Adaptable, Reliable Systems (STARS) Program

(Final rept)

Ett, W. H.

IBM Federal Sector Div., Gaithersburg, MD.

Corp. Source Codes: 099327000; 422280

21 Jun 90 146p

Languages: English

Journal Announcement: GRAI9109

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Information **Object** Modeling is a technique for developing specification models for systems. The techniques for building Information **Object** Models were adapted from techniques of real-time structured analysis and the **Foxboro** company's experience in specifying and developing real-time **process control systems**. An Information **Object** Model (IOM) is organized to provide levels of information for different audiences, so that one document can meet the needs of different people. A mission statement describes the scope of the system. An overview of the system describes the major functional **objects**. Finally, each functional **object** is discussed in detail. The modeling techniques for an IOM use the graphical techniques of real-time structured analysis, including transformation diagrams (data flow plus control flow), state transition diagrams, and entity relationship diagrams. Transformation diagrams, however, are applied in a different manner, representing the communication of **objects** organized hierarchically rather than a functional decomposition of processes. This report introduces the IOM methodology, explains what an Information **Object** Model is, and provides guidance on developing and reviewing diagrams as part of such models. The report also discusses the brief, yet intense

history of a government-run experiment using the Information Object Modeling methodology. (KR)

17/7/40 (Item 1 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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05017686 E.I. No: EIP98054210555  
**Title:** Oilfield automation via open control systems  
**Author:** Holden, David G.  
**Corporate Source:** Foxboro Co, Houston, TX, USA  
**Source:** Sea Technology v 39 n 4 Apr 1998. p 19-21, 23, 25  
**Publication Year:** 1998  
**CODEN:** SEATAD **ISSN:** 0093-3651  
**Language:** English  
**Document Type:** JA; (Journal Article) **Treatment:** G; (General Review)  
**Journal Announcement:** 9807W3

**Abstract:** The **Foxboro** I/A system was selected in 1995 by Chevron USA for automation of the Norphlet field in the Gulf of Mexico. Like many offshore producers, Chevron had been using a combination of **programmable logic controllers**, single loop controllers, and personal computer-based man-machine interface packages. The **Foxboro** system handled the enormous offshore processing with conjunction with the open **control systems** (OCS). The adaptation of OCS to offshore **application** has benefits which include: increased production; energy savings; control maintenance time reduction; and reduced human errors. 1 Refs.

17/7/41 (Item 2 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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04935269 E.I. No: EIP98024058624  
**Title:** Advanced fiberline controls yield return for Avenor market pulp mill  
**Author:** Williamson, Mark  
**Source:** Pulp & Paper v 72 n 1 Jan 1998. p 103-105  
**Publication Year:** 1998  
**CODEN:** PUPAA8 **ISSN:** 0033-4081  
**Language:** English  
**Document Type:** JA; (Journal Article) **Treatment:** G; (General Review)  
**Journal Announcement:** 9804W2

**Abstract:** Avenor's bleached kraft pulp mill recently upgraded the **process control** on its two elemental chlorine-free fiberlines. Avenor decided to go a step further by implementing advanced digester **controls** based on **process** models, coupled with measurements of the liquor strength, the progress of chemical reactions and the degree of fiber delignification. This higher level of control was considered essential to stabilize process conditions and make smooth transitions so that the operators could then concentrate on optimizing quality and costs of production. The mill chose the **Foxboro** I/A **system** as the **distributed control system** partnered with Modo Chemetics to implement advanced digester **controls** **configured** entirely within the I/A system.

17/7/42 (Item 3 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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04141214 E.I. No: EIP95042674886

**Title: Regulations drive refiners to improved blending control**

Author: Hall, Fred; Kinney, Tom

Corporate Source: Foxboro Co, Foxboro, MA, USA

Source: Control Engineering v 42 n 3 Mar 1995. 3pp

Publication Year: 1995

CODEN: CENGAX ISSN: 0010-8049

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 9506W3

**Abstract:** The Environmental Protection Agency (EPA) clean air regulations are forcing U.S. petroleum refiners to take a closer look at **process control** and optimization. **Foxboro** has come up with three products that could help immensely in the compliance with the EPA regulations. The first is an in-line digital blender, which provides extensive blend control capabilities to help minimize the difficulty of accurately blending multicomponent, reformulated gasolines to multiple interactive specifications. The second is a new, enhanced error-based blend controller combines the benefits of both ratio and volume-based control, but without any of the disadvantages. **Foxboro** 's powerful, computer-based Blend Optimization and Supervisory System (BOSS) provides on-line, **linear program** -based **multivariable control** of components to produce blended products that satisfy quality specifications at the lowest possible cost.

17/7/43 (Item 4 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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03978447 E.I. No: EIP94112413434

**Title:** Automation system **monitors**, controls **fab HVAC, other systems**

Author: Anon

Source: Microcontamination v 12 n 8 Aug 1994. p 25

Publication Year: 1994

CODEN: MCRCE5 ISSN: 0738-713X

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 9412W4

**Abstract:** **Foxboro** Co's ( **Foxboro** , MA) I/A Series advanced automation system helps engineers at Motorola's semiconductor plant near Austin, TX, maintain air quality, regulate wastewater treatment, and respond to out-of-spec conditions. Through **configurable** **Foxboro** interfaces, the automation system allows monitoring and provision of alarm capabilities for the plant's gas detection, fire detection and safety, and ultrapure water systems. The system is composed of multiple networked nodes, with each node having I/A series control, workstation, **application** and communication processors, and other system modules residing in a fault-tolerant node bus. Field bus (I/O) modules connect to their related **control processors** through the I/A series field bus. Each node is linked into a common system through a high-performance fault-tolerant I/A series LAN and integrated through the system's global real-time distribution database. **Object** -based communications allow the **control system** to be expanded incrementally.

17/7/44 (Item 5 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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03864777 E.I. No: EIP93121160937

**Title:** Advancements in maintaining process control systems  
**Author:** Hasselbaum, Robert D.  
**Corporate Source:** Foxboro Co, Foxboro, MA, USA  
**Conference Title:** Proceedings of the International Conference on Exhibition & Training Program (ISA/93)  
**Conference Location:** Chicago, IL, USA Conference Date: 19930919-19930924  
**E.I. Conference No.:** 19454  
**Source:** Advances in Instrumentation and Control : International Conference and Exhibition v 48 pt 1 1993. Publ by Instrument Society of America, Research Triangle Pk, NC, USA. p 447-456  
**Publication Year:** 1993  
**CODEN:** AVINBP **ISSN:** 1054-0032 **ISBN:** 1-55617-463-2  
**Language:** English  
**Document Type:** CA; (Conference Article) **Treatment:** T; (Theoretical); G; (General Review)  
**Journal Announcement:** 9407W1  
**Abstract:** Service technology has changed dramatically over the last 10 years, moving beyond a 'fix-it' mentality. Real-time remote support is an excellent example of this advanced technology, allowing us to strive for the highest level of production and product quality; something that was never before possible. The ideal intent of service is to support the continuous availability of the process system. This means all system functions work all the time. System availability is a result of two related characteristics: reliability and maintainability. Reliability is the time between failures, while maintainability is the effort and time required to resolve problems that do occur. FoxWatch was introduced by the **Foxboro** Company in 1991 to meet these objectives. Through System Administration the highest level of reliability is achieved throughout the system life cycle. When a problem does occur, through remote diagnosis maintainability of the **process control system** is a reality. In the process of implementing these fundamental services it was discovered that once a remote connection is established, many additional services could be provided, including. \* System Initiated Diagnosis. \* Remote Spares Support. \* Expert System Support. \* Remote **Application** Support. \* Remote File Management. This article both the fundamental remote service required to enhance system availability and the additional benefits possible due to this technique.

17/7/45 (Item 6 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)  
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03105646 E.I. Monthly No: EIM9108-037676  
**Title:** Effect of reduced operator alertness on the night shift on process control operator performance.  
**Author:** Moore-Ede, Martin; Campbell, Scott; Baker, Theodore  
**Corporate Source:** Inst for Circadian Physiology, Boston, MA, USA  
**Conference Title:** Proceedings of the ISA/89 International Conference and Exhibit Part 3 (of 4)  
**Conference Location:** Philadelphia, PA, USA Conference Date: 19901022  
**E.I. Conference No.:** 13785  
**Source:** Advances in Instrumentation, Proceedings v 44 pt 3. Publ by ISA Services Inc, Research Triangle Pk, NC, USA. p 967-970  
**Publication Year:** 1989  
**CODEN:** AVINBP **ISSN:** 0065-2814  
**Language:** English  
**Document Type:** PA; (Conference Paper) **Treatment:** A; (Applications); X; (Experimental)  
**Journal Announcement:** 9108  
**Abstract:** Human alertness measured by encephalographic (EEG) criteria

displays a robust circadian rhythm with minimal alertness occurring between 01:00-06:00 hrs (i.e., during the night shift). Several studies have shown that performance in monotonous vigilance tasks shows significant deterioration when alertness is reduced. Therefore, an important consideration in designing **process control** man-machine interfaces is whether increased process automation and reliability increase the risk of human operator error because of increased monotony in the operator's job, especially on the night shift. To examine whether the performance of the operator of **industrial process control** consoles is influenced by the nocturnal dip in physiological alertness, volunteers are being studied while working 12-hour and 8-hour night shifts in a simulated **industrial control** room **equipped** with a **Foxboro** Command Center **process control** console. The displays of multiple variables on multiple screens are **programmed** to undergo slow or occasional fluctuations with and without alarms. EEG measures of alertness are being studied in conjunction with operator performance to detect variables exceeding high or low limits. (Author abstract)

17/7/46 (Item 7 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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03092047 E.I. Monthly No: EIM9107-031586  
**Title: Remote troubleshooting and predictive maintenance for process analyzers and systems.**  
Author: McCurley, Will  
Corporate Source: Foxboro Co, Foxboro, MA, USA  
Conference Title: Proceedings of the ISA/89 International Conference and Exhibit Part 1 (of 4)  
Conference Location: Philadelphia, PA, USA Conference Date: 19891022  
E.I. Conference No.: 13785  
Source: Advances in Instrumentation, Proceedings v 44 pt 1. Publ by ISA Services Inc, Research Triangle Pk, NC, USA. p 341-344  
Publication Year: 1989  
CODEN: AVINBP ISSN: 0065-2814  
Language: English  
Document Type: PA; (Conference Paper) Treatment: A; (Applications)  
Journal Announcement: 9107  
**Abstract:** The remote diagnostic feature is a new, major development for providing maintenance and service for gas chromatographs/infrared products and systems presently in use throughout the process industry today. Within minutes, factory analytical experts (via telephone modem) can monitor operating parameters to diagnose and solve most problems; placing equipment back in service with minimal downtime. Another major benefit is ability to perform predictive maintenance. This allows analytical experts to monitor equipment operating parameters routinely and predict failures in advance, thus permitting corrective action to be planned, and thereby eliminating costly emergencies. (Author abstract)

17/7/47 (Item 8 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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02898888 E.I. Monthly No: EI9005057295  
**Title: Southeast paper installs largest Foxboro distributed control system .**  
Author: Tobin, David  
Corporate Source: Southeast Paper Manufacturing Co, Dublin, GA, USA

Source: Pulp & Paper v 64 n 2 Feb 1990 p 84-88  
Publication Year: 1990  
CODEN: PUPAA8 ISSN: 0033-4081  
Language: English  
Document Type: JA; (Journal Article) Treatment: G; (General Review)  
Journal Announcement: 9005  
Abstract: A description is presented of the **Foxboro** I/A (Intelligent/Automation) distributed control system. The **Foxboro** I/A system consists of 12 nodes (11 are used for control). The 12 nodes contain 12 pairs of fault-tolerant application processors and 24, 80-megabyte hard drives configured as 12 mirrored drives. Thirty-three workstation processors control 33 touch-screen CRTs. Sixty-six pairs of fault-tolerant CPUs have a total of 475 digital FBM (Fieldbus Modules) and 396 analog FBM. These analog FBM provide a total of about 7,600 discrete I/O points and 3,200 analog I/O points. Four foreign device gateways provided interfacing to another 500 points. There are 14 printers. The hardware is divided almost equally among the three operational areas of power, pulp, and paper.

17/7/48 (Item 9 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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02634047 E.I. Monthly No: EI8809082469  
Title: DESIGNING CONTROL SYSTEMS WITH AN EXPERT SYSTEM.  
Author: Blickley, George J.  
Corporate Source: Control Engineering, Denver, CO, USA  
Source: Control Engineering v 34 n 9 Sep 1987 p 112-113  
Publication Year: 1987  
CODEN: CENGAX ISSN: 0010-8049  
Language: English  
Document Type: JA; (Journal Article) Treatment: A; (Applications)  
Journal Announcement: 8809  
Abstract: Capturing the expertise of control engineers and using it to design instrumentation and control systems for a process is a little more difficult than writing a few WHAT IF or IF THEN statements. The **Foxboro** Co. did exactly this and has produced 'productivity enhancement tools' that are available to process designers on a consulting basis. One is used for distillation columns, and another one - called the Batch Reactor Consultant - is used to design the control system for many different types of batch reactors. The **Foxboro** Batch Reactor Consultant expert system produces a complete process and instrument diagram when all questions are answered concerning the reactor parameters and auxiliaries. An instrument list and connection diagram can then be generated by the program.

17/7/49 (Item 10 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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02360028 E.I. Monthly No: EIM8712-087500  
Title: EXACT PATTERN RECOGNITION ADAPTIVE CONTROLLER, A USER-ORIENTED COMMERCIAL SUCCESS.  
Author: Bristol, E. H.  
Corporate Source: Foxboro Co, Foxboro, MA, USA  
Conference Title: Adaptive and Learning Systems: Theory and Applications.  
Conference Location: New Haven, CT, USA Conference Date: 19850529  
E.I. Conference No.: 10381

Source: Publ by Plenum Press, New York, NY, USA p 149-163  
Publication Year: 1986  
ISBN: 0-306-42263-8  
Language: English  
Document Type: PA; (Conference Paper)  
Journal Announcement: 8712  
Abstract: A pattern recognition-based adaptive control concept (termed EXACT) has been commercialized successfully as a universal successor to The **Foxboro** Company's current electronic controllers. The delay in market entry was a consequence of a design, incredible (for different reasons) to both academic and practitioner. Yet it evolved not as a regression from the now standard, theory motivated, model-based designs, but as an artificial intelligence related advance over them, suggested by studies on the effects of mismodeling. In this regard, it offers superior adaptation through direct performance feedback. In the absence of a general adaptation theory, an essential element contributing to the development of the EXACT concept was an experimental analysis technique which permitted rigorous demonstration of the general applicability of the method. (Edited author abstract) 7 refs.

17/7/50 (Item 11 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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01628909 E.I. Monthly No: EIM8402-012618  
Title: USE OF DYNAMIC MODELS IN ADVANCED CONTROL APPLICATIONS .  
Author: Stapleford, Kenneth R.  
Corporate Source: Stone & Webster Engineering Corp, Boston, Mass, USA  
Conference Title: American Institute of Chemical Engineers, 1983 Spring National Meeting and Petro Expo '83 (Preprints).  
Conference Location: Houston, Tex, USA Conference Date: 19830327  
Sponsor: AIChE, New York, NY, USA  
E.I. Conference No.: 03056  
Source: American Institute of Chemical Engineers, National Meeting 1983 Spring. Publ by AIChE, New York, NY, USA Pap 90e, 23p  
Publication Year: 1983  
CODEN: ACENC9  
Language: English  
Document Type: PA; (Conference Paper)  
Journal Announcement: 8402

17/7/51 (Item 12 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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01583699 E.I. Monthly No: EI8411121324 E.I. Yearly No: EI84090944  
Title: MILL-WIDE AUTOMATION: A LOOK AT WHAT'S AVAILABLE.  
Author: Fadum, Ole-Kristian  
Corporate Source: Ontario CAD/CAM Cent, Cambridge, Ont, Can  
Source: Pulp and Paper Journal v 37 n 3 Apr 1984 p 12-13, 16-17  
Publication Year: 1984  
CODEN: PPAJDU ISSN: 0713-5807  
Language: ENGLISH  
Journal Announcement: 8411  
Abstract: This paper reviews process control systems including computer soft- and hardware suitable for automatic control in pulp and paper mills in Canada. Equipment survey includes robotics as the first step towards full automation. There are currently more than 40 suppliers of distributed control systems and more are added every day. The main

suppliers are Honeywell, **Foxboro**, Fisher and Bailey. In addition, several suppliers to the paper industry have introduced distributed systems such as Valmet, Sentrol, Measurex, and Robin. One of the reasons for this proliferation of systems is the relatively low cost of designing and building these microprocessor-based systems.

17/7/52 (Item 13 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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01559811 E.I. Monthly No: EI8409094353 E.I. Yearly No: EI84091130  
**Title: NEW FINE PAPER MACHINE AT CHAMPION.**

Author: Smith, Ken  
Corporate Source: Pulp & Paper Int, San Francisco, Calif, USA  
Source: PPI, Pulp & Paper International v 26 n 1 Jan 1984 p 50-52  
Publication Year: 1984  
CODEN: PUPIAW ISSN: 0033-409X  
Language: ENGLISH  
Journal Announcement: 8409

Abstract: A new Beloit fourdrinier machine at Champion International Corporation's Courtland mill in Alabama is helping the company to reap the benefits of a current upturn in demand for communication papers. The machine features state-of-the-art **process control** with **Foxboro** Videospec **distributed** digital instrumentation and a Measurex 2002 dedicated computer system. The fourdrinier wet-end **configuration** was chosen rather than a twin-wire because it offered better first-pass retention (about 78%), which is considered vital for producing high-quality, lightweight, opaque and communications papers.

17/7/53 (Item 14 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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01329433 E.I. Monthly No: EI8302013286 E.I. Yearly No: EI83076530  
**Title: DISTRIBUTED COMPUTER CONTROL FOR INDUSTRIAL PROCESS SYSTEMS - CHARACTERISTICS, ATTRIBUTES, AND AN EXPERIMENTAL FACILITY.**  
Author: Buchner, Marcus R.; Lefkowitz, Irving  
Corporate Source: Case West Reserve Univ, Cleveland, Ohio, USA  
Source: IEEE Control Systems Magazine v 2 n 1 Mar 1982 p 8-15  
Publication Year: 1982  
CODEN: ISMAD7 ISSN: 0730-6598  
Language: ENGLISH  
Journal Announcement: 8302

Abstract: The **application** of microprocessor-based **distributed control systems** in **process** industries is considered. A laboratory facility, centered around a **Foxboro SPECTRUM distributed control system** is described. It will provide an experimental base for the motivation, development, and testing of analytical theory, methodologies, and engineering tools for the design and analysis of these complex **control systems**. A discussion of the characteristics and attributes of **distributed computer control** is followed by an overall description of the laboratory facility. This includes a description of the control, communication, and computer components as well as the instrumented test-bed processes. Finally, an overview of several current and proposed research studies using this facility is presented. 16 refs.

17/7/54 (Item 15 from file: 8)

DIALOG(R)File 8:EI Compendex(R)  
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01298135 E.I. Monthly No: EIM8305-033224

**Title: EXPERIENCE WITH A MICROPROCESSOR BASED DISTRIBUTED CONTROL SYSTEM .**

Author: Dillow, William M.

Corporate Source: Gulf Sci & Technol Co, Houston, Tex, USA

Conference Title: Proceedings - 37th Annual Symposium on Instrumentation for the Process Industries.

Conference Location: College Station, Tex, USA Conference Date: 19820119

Sponsor: Tex A&M Univ, Dep of Chem Eng, College Station, USA

E.I. Conference No.: 01965

Source: Proceedings - Annual Symposium on Instrumentation for the Process Industries (Texas A and M University) 37th. Available from ISA, Research Triangle Park, NC, USA p 5-10

Publication Year: 1982

CODEN: PTIBA3 ISSN: 0096-7963 ISBN: 0-87664-537-6

Language: English

Document Type: PA; (Conference Paper)

Journal Announcement: 8305

**17/7/55 (Item 16 from file: 8)**

DIALOG(R)File 8:EI Compendex(R)

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01207303 E.I. Monthly No: EIM8207-015451

**Title: FORUM ON MAN/PROCESS INTERFACES.**

Author: Shirley, R. S.; Campbell, B. D.; Robinson, W. B.

Corporate Source: Foxboro Co, Mass, USA

Conference Title: Proceedings of the ISA Conference and Exhibit.

Conference Location: Houston, Tex, USA Conference Date: 19801020

Sponsor: ISA Ind and Sci Dep Div, Research Triangle Park, NC, USA; ISA Electro-Opt Group, Research Triangle Park, NC, USA; ISA Technol Dep Div, Research Triangle Park, NC, USA; ISA Educ Dep, Research Triangle Park, NC, USA

E.I. Conference No.: 00267

Source: Advances in Instrumentation v 35 pt 2. Publ by ISA, Research Triangle Park, NC, USA p 91-99

Publication Year: 1980

CODEN: AVINBP

Language: English

Document Type: PA; (Conference Paper)

Journal Announcement: 8207

**17/7/56 (Item 17 from file: 8)**

DIALOG(R)File 8:EI Compendex(R)

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01019169 E.I. Monthly No: EI8105043619 E.I. Yearly No: EI81076413

**Title: SPECIFICATION AND PROCUREMENT OF ACCEPTABLE DISTRIBUTED DIGITAL CONTROL SYSTEMS .**

Author: Lynn, Steven R.

Corporate Source: Day & Zimmermann Inc, Philadelphia, Pa

Source: Instrumentation in the Chemical and Petroleum Industries v 16, Proc of Spring Jt Conf, ISA's Chem and Pet Ind Div Process Meas and Control Div Process Effic Through Instrum, Secaucus, NJ, Apr 1-3 1980. Publ by ISA, Research Triangle Park, NC, 1980 p 119-122

Publication Year: 1980  
CODEN: INCPAW ISSN: 0074-0551  
Language: ENGLISH  
Journal Announcement: 8105

Abstract: The present trend of using **distributed** digital control in industrial plant installations has placed a greater burden upon the engineers who must specify such systems. This study concentrates on an orderly and efficient method of procuring a **distributed process control system** employing operator consoles with video display screens (e. g. , Honeywell TDC 2000, **Foxboro** Spectrum, Taylor MOD III, et al. ). However, some of the points discussed for a **distributed control system** can be similarly applied to minicomputers and **programmable** controllers.

17/7/57 (Item 18 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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00947081 E.I. Monthly No: EI8009066013 E.I. Yearly No: EI80018114  
Title: **FOX 3 INTEGRATED CONTROL SYSTEM ARCHITECTURE**.  
Author: Ahmed, A.  
Corporate Source: Foxboro Ltd  
Source: National Conference Publication - Institution of Engineers, Australia n 79/12, Conf on Microprocess Syst, Prepr of Pap, Melbourne, Aust, Nov 27-28 1979. Publ by Inst of Eng, Aust, Barton, 1979 p 123-127  
Publication Year: 1979  
CODEN: NPIEDX ISSN: 0313-6922  
Language: ENGLISH  
Journal Announcement: 8009  
Abstract: A description is provided of the requirement of modern digital **process control systems** and how this is achieved through the **FOXBORO FOX 3/INTERSPEC/SPEC 200** systems which is a fully integrated hardware and **software** system for plant monitoring, **process control** and management. It provides facilities to build different types of **control systems**, from the most simple, to advanced type including optimal control and energy management.

17/7/58 (Item 19 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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00936898 E.I. Monthly No: EI8007054802 E.I. Yearly No: EI80069812  
Title: **COMPUTER CONTROLLED VAPOR PHASE DIGESTER WITH A PRE-IMPREGNATION VESSEL**.  
Author: Fadum, Ole; Bostrom, Georg  
Corporate Source: Foxboro Co, Mass  
Source: TAPPI Pulping Conf Proc, Seattle, Wash, Sep 24-26 1979 Publ by TAPPI, Atlanta, Ga, 1979 p 9-16  
Publication Year: 1979  
Language: ENGLISH  
Journal Announcement: 8007  
Abstract: This paper describes a pulp mill in Sweden which chose a Kamyr digester with a pre-impregnation vessel to produce a uniform pulp with low shive content and to provide better utilization of raw materials. Space limitations in the mill also favored the use of a continuous digester. To control this **process** in an optimum manner, a **Foxboro** integrated **control system** consisting of transmitters, analog instrumentation, and a process computer was chosen. A working information system could be delivered on short notice to be available for the startup of the digester.

The control is based on the **Foxboro** continuous digester **control system** with modifications mutually arrived at between **Foxboro**, AKA, and MODO. The most important modification is the extensive use of MODO Chemetics effective alkali analyzer. Details of the **control system** and its operation are given. 4 refs.

17/7/59 (Item 20 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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00736002 E.I. Monthly No: EI7808056382 E.I. Yearly No: EI78019004  
**Title:** PROCESS CONTROL IN THE LORNEX GRINDING CIRCUIT.  
**Author:** McManus, James; Paul, Allan R.; Yu, Frank  
**Corporate Source:** Lornex Min Corp Ltd, Logan Lake, BC  
**Source:** CIM Bulletin v 71 n 783 May 1978 p 146-151  
**Publication Year:** 1978  
**CODEN:** CIBUBA **ISSN:** 0317-0926  
**Language:** ENGLISH  
**Journal Announcement:** 7808  
**Abstract:** The Lornex Mine is a large open-pit operation in the Highland Valley in south-central British Columbia. The ore is described as a modified quartz porphyry type, containing approximately 0. 43% copper and 0. 015% Mo. The original analogue instrumentation at Lornex to optimize the throughput by controlling the power drawn by the semi-autogenous mills was found to be inadequate because of the frequent changes in ore type. Computer control strategy to optimize the grinding rate by controlling the power and the bearing pressure of the semi-autogeneous mill was developed and a Fox 2/30 computer made by **Foxboro** was selected. After six months of experimentation, it was found that the throughput was increased substantially by computer control.

17/7/60 (Item 1 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
(c) 2003 Japan Science and Tech Corp(JST). All rts. reserv.

00232461 JICST ACCESSION NUMBER: 86A0231999 FILE SEGMENT: JICST-E  
**Most advanced integrating flow meter.** FOXBORO Flow Expert.  
**ITO HIROSHI** (1)  
(1) Fokusuboro  
Keisoku Gijutsu (Instrumentation and Automation), 1986, VOL.14, NO.3,  
PAGE.226-229, FIG.4, TBL.1, REF.1  
JOURNAL NUMBER: S0852AAH ISSN NO: 0385-9886  
UNIVERSAL DECIMAL CLASSIFICATION: 532.08+532.5  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

17/7/61 (Item 1 from file: 95)  
DIALOG(R)File 95:TEME-Technology & Management  
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01043464 E96100508248  
**'Virtual units' + S88 = flexible pilot plant**  
(Flexible Pilotanlage durch 'virtuelle Einheiten' und Anwendung der ISA-Norm S88)  
Parapar, RE; Korkmaz, B

Gentech San Francisco, USA; Foxboro Massachusetts, USA  
InTech, v43, n8, pp38-43, 1996  
Document type: journal article Language: English  
Record type: Abstract  
ISSN: 0192-303X

ABSTRACT:

Es wird ueber die erfolgreiche Anwendung der Norm S88 fuer Aufgaben der Prozessregelung in der Firma Gentech beim Aufbau einer Wiedergewinnungs- und Reinigungsanlage fuer Protein und Zellmaterial berichtet. In Zusammenarbeit mit **Foxboro** Company wurde die schwierige Forderung erfuellt, fuer die Benutzer dieser Anlage die Flexibilitaet von Laboranlagen im industriellen Massstab zu verwirklichen. Es stand die Aufgabe, ein flexibles Regelungssystem fuer die Durchfuehrung von Experimenten mit komplexen Prozessoperationen und vielfaeltigen Ausruestungskombinationen aufzubauen. Taeglich notwendige Aenderungen in Anzahl und Art solcher Experimente erforderten es, in das Regelungssystem die Faehigkeit zur schnellen und einfachen Rekonfigurierung von Prozessabfolgen und Prozessinstrumentierung zu integrieren. Grundlage der Arbeiten waren die S88-basierten Strukturen und Terminologie. Die Harware des Regelungssystems baut auf dem hybriden verteilten intelligenten Automatisierungssystem von **Foxboro** und dem **programmierbaren** Logikcontroller von Allen-Bradley auf. Das System wurde in zwei Phasen implementiert: zunaechst dem Entwurf und der Entwicklung der wichtigsten Regelungsfunktionen (Rezeptmanagement, Datenerfassung, Abfolgeregelung, Ressourcenverwaltung) und spaeter der Einbeziehung der Chromatographie, der Filterung des tangentiellen Flusses und anderer Applikationen. Es wird ueber Struktur, Funktionsumfang und Betriebserfahrungen des Regelungssystems berichtet.

17/7/62 (Item 2 from file: 95)  
DIALOG(R)File 95:TEME-Technology & Management  
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01008449 I96071953240  
Going very open-but keeping very safe (TDC 3000 control system)  
(Das Prozessleitsystem TDC 3000 von Honeywell laeuft unter Windows NT)  
Tinham, B  
Control and Instrumentation, v28, n6, pp48, 50, 1996  
Document type: journal article Language: English  
Record type: Abstract  
ISSN: 0010-8022

ABSTRACT:

The launch of Honeywell's main **control system**, TDC 3000, on Microsoft Windows NT, has given the clearest possible indication of the future for **control systems**. It's all about the PC and Microsoft-open, commercial, commodity systems. Although it follows **Foxboro**'s, Bailey's and Honeywell's own (SCAN 3000) earlier system announcements all also on Windows NT, this is not entirely the end of proprietary systems. Honeywell's latest, TPS (Total Plant Solution), isn't merely a porting of an existing system onto NT-there's a lot more to it. In fact, what's particularly interesting here is threefold-the power and flexibility from the level of NT, Foundation Class and OLE ( **object** linking and embedding) adoption; the ruggedness that comes from Honeywell's specific "open yet secure" approach; and the sheer scope of process CIM afforded by the company's new third party alliances.

17/7/63 (Item 3 from file: 95)  
DIALOG(R)File 95:TEME-Technology & Management  
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00966167 E96020332254  
**Kraftwerksleittechnik - Ein Rueckblick auf die Interkama 1995**  
(Power plant control systems - a retrospective view at the Interkama 1995)  
Eisenburger, L; Nix, HG  
Siemens Karlsruhe, D  
Elektrizitaetswirtschaft, v95, n1/2, pp18-20,22-24,26-29, 1996  
Document type: journal article Language: German  
Record type: Abstract  
ISSN: 0013-5496

**ABSTRACT:**

Verschiedene, auf der Interkama 1995 in Duesseldorf, der Fachmesse fuer die Mess-, Steuer-, Regel- und Automatisierungstechnik vorgestellte Kraftwerksleittechniksysteme verschiedener Hersteller werden beschrieben. Die Strukturen, Funktionen und besonderen Eigenschaften der Teilsysteme des Kraftwerksleittechniksystems Teleperm XP der Siemens AG Muenchen (KWU), des OM 650 fuer die Prozessfuehrung und -information, des Engineering-Systems ES 680 fuer die Projektierung der **Software** - und Hardwarefunktionalitaeten, des Diagnosesystems DS 670 fuer das Leittechnikpersonal, des Automatisierungssystems AS 620, und des Bussystems Sinec fuer den anlagenweiten Anlagenbus, die besonderen Merkmale des weiterentwickelten bewaehrten Kraftwerksleitsystems Procontrol P der ABB Kraftwerksleittechnik, Mannheim, mit einem neuen FDDI-Prozessbus und verbessertem Engineering-, Dokumentations- und Servicesystem EDS, der Aufbau und die Funktionen des Prozessleitsystems der neuen Generation Contronic S der Hartmann & Braun, Frankfurt, mit den drei Funktionsbereichen Contronic S-Operation fuer das Bedienen und Beobachten, Control S- **Control** fuer die prozessnahe **Automatisierung** und **Control** S-Engineering fuer die Planung, das Engineering sowie fuer Service und Information, die Aufgaben der Komponenten des dezentralen Prozessleitsystems Centum CS von Yokogawa Deutschland, Ratingen, der Information and Command Station (ICS) fuer die Bedienung und Beobachtung, der Engineering Workstation (EWS) fuer die Konfigurierung und Parametrierung, der **Field Control** Station (FCS) fuer die prozessnahe Automatisierung und des Systembusses V net fuer die Kommunikation zwischen Leitebene und den Control-Stations, die Erweiterungen und Innovationen des Prozessleitsystems I/A-Series der **Foxboro** Eckardt, Stuttgart, sowie die Funktionen und Eigenschaften der Komponenten des Kraftwerks- und Prozessleitsystems ME 4012-SUB-NET von Mauell, Velbert, werden erlaeutert.

17/7/64 (Item 4 from file: 95)  
DIALOG(R)File 95:TEME-Technology & Management  
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00931377 U95110010586  
**Automated process control improves productivity at Asarco's Mission Complex**  
(Die automatisierte Prozesssteuerung verbessert die Produktivitaet in der Aufbereitung Asarco Mission Complex)  
Garrity, J; Reynolds, J; Fillion, JW  
Mining Engineering, v47, n9, pp817-822, 1995  
Document type: journal article Language: English  
Record type: Abstract  
ISSN: 0026-5187

**ABSTRACT:**

Der Asarco Mission Complex besteht aus 2 Kupfererz-Aufbereitungen in Arizona, die taeglich 39 kt Erz verarbeiten. Zur Produktionserhoehung wurde ein spezifisches System der Prozesssteuerung entwickelt, das die Systemverlaesslichkeit und redundante Fehlertoleranz-Prozessoren in besonders kritischen Bereichen enthaelt. Die Anforderungen an die Datenverarbeitung sind das wichtigste Kriterium, es enthaelt die Erfassung, Bearbeitung und Uebertragung. Diese Anforderungen werden durch ein offenes industrielles System erfuellt, gewaehlt wurde das System **Foxboro** Intelligent Automation Series (IAS). Ein anderes Kriterium beinhaltet die Hardware, **Software**, Systemkonfiguration und Ausbildung. Die offenen Systeme verwenden Datenblockstrukturen, die die Komplex-Steuerprobleme in kleine Komponenten aufloesen. Das Objektmanagement hat auf alle Systeme Zugriff ueber die Benennung. Das Informations-Management uebertraegt die Echtzeitdaten direkt in die Datenbank, die dann durch eine Stationsaufforderung abgerufen werden koennen. Durch das Konzept der Objektorientierung und Blockstruktur wurde die Aufbereitung in Basiselemente zerlegt und dann in ein vollintegriertes Steuerschema zurueckverwandelt. Von 1987 bis 1990 wurden verschiedene Analysen durchgefuehrt und daraus die Konzepte der 'dynamischen Messungen des Betriebsverhaltens' (DPM) entwickelt. Die erste DPM war die Vorzerkleinerung in Tonnen pro Stunde. Die zweite und dritte DPM umfasste das gesamte Kupferausbringen und den endgueltigen Metallgehalt im Konzentrat. Die DPM fuer Energiekosten wurde noch nicht eingefuehrt, fuer Reagenskosten ist sie den Kosten fuer Kalk untergeordnet. Die Einfuehrung der DPM in die Aufbereitung war komplexer als urspruenglich angenommen. Die Annahme des Systems ist allgemein positiv und hat die Moeglichkeiten fuer die Leitungskosten im Betrieb demonstriert, zeigt detailliert, wie der Betrieb laeuft und wie Betriebsentscheidungen getroffen werden.

17/7/65 (Item 5 from file: 95)

DIALOG(R)File 95:TEME-Technology & Management  
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00782014 M94076152586

Process control  
(Prozessueberwachung)  
anonym

Mining Magazine, v170, nMai, pp268,270,272,275,277, 1994  
Document type: journal article Language: English  
Record type: Abstract  
ISSN: 0308-6631

**ABSTRACT:**

Hersteller- und Erzeugnisuebersicht von Prozessueberwachungs- und Automatisierungssystemen fuer Aufbereitungs- und Verarbeitungsbetriebe der Bergbauindustrie. Amdel (Australien) ist Hersteller von Analysensystemen fuer die Prozessueberwachung in Erz- und Kohlenaufbereitung. In der Kupfermine Mount Lyell in Tasmanien arbeitet ein derartiges System bereits ueber 20 Jahre. 1993 wurde mit dem Amdel-JK Dry Stream Analyser ein neuer Analysator fuer Bestimmung der Zusammensetzung von Feststoffgemischen eingefuehrt. Die bei der Kohlenflotation eingesetzte Kontrolltechnik wird genannt. Boliden **Process Control** AB (Schweden) bietet Informationssysteme fuer Ueberwachungsprogramme in Aufbereitungsanlagen, Kontroll- und Regeltechnik fuer stationaere Bergbautechnik, Analysatoren und Alarmsysteme an. On-line-Kontrolltechnik auf der Grundlage von Expertensystemen fuer Aufbereitungs- und Metallurgieanlagen werden von Control International (Frankreich) entwickelt und installiert. Derartige Systeme arbeiten unter anderem in Schweden und Griechenland. Denver

Autometrics (USA) produziert Geraete fuer die On-line-Bestimmung der Teilchengroesse und Analysatoren fuer Elementkonzentrationen in Aufbereitungsanlagen. Weiterhin vorgestellt werden **Foxboro** (I/A Series **Automatisierungssystem**), Inflo Bulk Control Systems (Mengenbestimmungssysteme), Kistler-Morse (Software), KX Technology (Analyseninstrumente), Markland (Schlammtiefenmessgeraete), Outokumpu Mintec Oy (Analysen- und Automatisierungstechnik), Prisector plc (Probenahmesysteme), Siemens (Automatisierungssysteme), TN Technologies (Mess- und Analysentechnik), Transmittion (Ueberwachungssysteme fuer Aufbereitungsanlagen), Westinghouse Systems (Ueberwachungssysteme fuer die Methanentgasung in Kohlenbergwerken). Beispiele fuer Einsatzorte der entsprechenden Systeme werden angefuehrt.

17/7/66 (Item 6 from file: 95)  
DIALOG(R)File 95:TEME-Technology & Management  
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00669217 E93053672245  
**Intelligente Prozessleittechnik**  
(Smart process control techniques)  
Heiner, V  
Messen & Pruefen, v28, n11/12, pp12-13, 1992  
Document type: journal article Language: German  
Record type: Abstract  
ISSN: 0937-3446

**ABSTRACT:**  
Als eines der ersten offenen Prozessleitsysteme liefert das seit 1988 in Deutschland verfuegbare I/A Series System von **Foxboro** die Moeglichkeit, alle Funktionen einer Produktionsanlage zu integrieren. Primaere und sekundaere Messwerte, umfassende Diagnosen und andere hochqualitative Informationen sind im Prozessleitsystem verfuegbar. Alle Messsysteme haben eine Direktverbindung zum seriellen Feldbus. Eine weitere Neuerung ist die Ferndiagnose (I/S Series Remote Diagnosis 'FOXWATCH') fuer das Prozessleitsystem. Dadurch koennen Systemspezialisten in der **Foxboro**-Zentrale eine direkte Verbindung zu I/A-Series und anderen **Foxboro**-Systemen aufbauen, die an beliebigen Orten der Welt installiert sind. Dies wird durch eine neu entwickelte Diagnose- **Software** und spezielle Modems erreicht.

17/7/67 (Item 7 from file: 95)  
DIALOG(R)File 95:TEME-Technology & Management  
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00560260 E92030647245  
**CAE in der Prozessleittechnik**  
(CAE in process control systems)  
Kihm, U  
Lurgi Frankfurt, D  
Automatisierungstechnische Praxis - atp, v34, n2, pp74-79, 1992  
Document type: journal article Language: German  
Record type: Abstract  
ISSN: 0178-2320

**ABSTRACT:**  
Der Statusbericht ueber Computer Aided Engineering (CAE) in der Prozessleittechnik auf der Achema '91 beschreibt die Entwicklung dieser Systeme in zwei Richtungen, CAE-Systeme fuer herstellereigene

Prozessleitsysteme und ganzheitliche CAE-Systeme mit Feld- und PLS-Engineering einschliesslich Dokumentation und Betriebsbetreuung. Der eingeschlagene Weg zum ganzheitlichen CAE-System geht eindeutig in Richtung Datenbank-Vernetzung und kleinere **Programm**-Module. Die Grundlagen der CAE-Systeme, die Aufgabenstellung fuer E-MSR, die Hardware- und **Software**-Planung, Datentransfer und Schnittstellen werden behandelt. Von einer Einzeldarstellung einiger CAE-Systeme fuer E-MSR sind Master AID 220 (ABB), Aucoplan (Aucotec), FOX CAE ( **Foxboro** ), Promur (Ghahremani), Condos +, Condos P, Condos C (Hartmann & Braun), The Engineering Bridge (Honeywell), Estar 90 (ISKA/Ing.-Buero Baer), HW-Plan (mbp), Pradok (Roesberg Engineering), Sigraph ET (Siemens Nixdorf) zu erwähnen.

**17/7/68 (Item 1 from file: 99)**

DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1816800 H.W. WILSON RECORD NUMBER: BAST98082988

**Visual tools heat up automation and process - control development**  
Desposito, Joseph;  
Electronic Design v. 46 no26 (Nov. 16 '98) p. 87-8+  
DOCUMENT TYPE: Feature Article ISSN: 0013-4872

**ABSTRACT:** A number of visual tools for the development of industrial automation **systems** and **process control** are described. These are LabVIEW and BridgeVIEW from National Instruments, FactorySuite 2000 from Wonderware, WonderLink from **Foxboro**, ProcessPak from Rockwell **Software**, Gello from Event Technologies, and Hard Real-Time Extension from VenturCom.

**17/7/69 (Item 2 from file: 99)**

DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1748803 H.W. WILSON RECORD NUMBER: BAST98029038

**Model-predictive controller solves complex problems**  
AUGMENTED TITLE: Connoisseur from **Foxboro** Company  
VanDoren, Vance J;  
Control Engineering v. 45 no3 (Mar. '98) p. 162  
DOCUMENT TYPE: Product Evaluation ISSN: 0010-8049

**ABSTRACT:** Model-predictive controllers (MPCs) employ mathematical models in the prediction of future behavior of the **processes** they **control**. Connoisseur, an MPC **software** package from The **Foxboro** Company of **Foxboro**, Massachusetts, was designed to make model-predictive control practical and accessible to those with basic process engineering knowledge. Most of the technical details are dealt with automatically and Connoisseur leads users through the **configuration** procedures without the need for extensive control theory.

**17/7/70 (Item 3 from file: 99)**

DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1445355 H.W. WILSON RECORD NUMBER: BAST96068199

**Plantwide control system makes Unix-type power affordable**  
Knights, Mikell;  
Plastics Technology v. 42 (Nov. '96) p. 29+  
DOCUMENT TYPE: Feature Article ISSN: 0032-1257

ABSTRACT: A Unix-based **software** supplier has brought the power of **distributed control** to a 32-bit Windows-based **system** for plantwide **process control**. Barber-Colman Co., Loves Park, Illinois, and The **Foxboro** Co., **Foxboro**, Massachusetts, have collaborated on the project and will introduce a family of supervisory **control** and monitoring **systems** for the full range of plastics processes in June 1997 at the NPE show in Chicago, Illinois.

17/7/71 (Item 4 from file: 99)  
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1313385 H.W. WILSON RECORD NUMBER: BAST96018564  
**Making animal feed production a science**  
Brown, Emilio;  
Control Engineering v. 43 (Mid-Feb. '96) p. 33  
DOCUMENT TYPE: Feature Article ISSN: 0010-8049

ABSTRACT: Pronaca, a manufacturer of animal feeds in Ecuador, South America, hired E. M. Brown to design and implement a state-of-the-art production facility. The aim was to provide a flexible, easy-to-use human-machine interface (HMI) and supervisory **control** and data acquisition **system** (SCADA) **software** to automate recipe and batch production. To meet these objectives, Genesis for Windows HMI/SCADA **software** from Iconics, **Foxboro**, Massachusetts, was chosen.

17/7/72 (Item 5 from file: 99)  
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1259785 H.W. WILSON RECORD NUMBER: BAST95055549  
**Foxboro unveils I/A series with 4X performance**  
InTech v. 42 (Aug. '95) p. 15-16  
DOCUMENT TYPE: Feature Article ISSN: 0192-303X

ABSTRACT: New RISC/SPARC-based I/A Series products from the **Foxboro** Company, Massachusetts, include a third generation of RISC-based processors offering a 4-fold performance boost at no extra cost, a new I/A Series **control processor** with 2.5-times control improvement, and new I/A Series Fieldbus cards for data acquisition and other control **applications**. Offering full backward compatibility, these products let users exploit the improved price/performance benefits of rapidly evolving general-purpose computer technologies within the traditional stable industrial automation system architecture.

17/7/73 (Item 6 from file: 99)  
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1147042 H.W. WILSON RECORD NUMBER: BAST94015599  
**Making the right automation choice**  
Morris, Charles E;  
Food Engineering v. 66 (Jan. '94) p. 74-5+  
DOCUMENT TYPE: Feature Article ISSN: 0193-323X

ABSTRACT: There are some basic points that companies should consider in

deciding what hardware and **software** systems they need. According to Peter Lovelace, vice president of **Foxboro**, speaking at the **Foxboro** Food & Drug Seminar, the need for process information is ascending from the plant floor to management information systems. He goes on to say that major food and pharmaceutical companies are moving away from "process management" to "process information management." The emphasis is moving from "systems integration" to "platform integration," integrating different **process - control** platforms on the plant floor, and subsequently integrating those systems with plantwide and enterprisewide business management systems.

17/7/74 (Item 7 from file: 99)  
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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0586373 H.W. WILSON RECORD NUMBER: BAST85020548  
**EXACT: Foxboro 's entry in artificial intelligence application**  
PIMA Magazine v. 67 (Jan. '85) p. 42  
DOCUMENT TYPE: Feature Article ISSN: 1046-4352

17/7/75 (Item 1 from file: 111)  
DIALOG(R)File 111:TGG Natl.Newspaper Index(SM)  
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04870993 Supplier Number: 18103951  
**PSDI ANNOUNCES WORLDWIDE ALLIANCE WITH THE FOXBORO COMPANY**  
PR Newswire, p318NEM004  
March 18, 1996

17/7/76 (Item 1 from file: 583)  
DIALOG(R)File 583:Gale Group Globalbase(TM)  
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06176564  
Microsoft sets sights on the factory floor  
US: **FOXBORO AND MICROSOFT WORK TOGETHER**  
Financial Times (FT) 11 Jul 1995 p.20  
Language: ENGLISH

The US computer **software** firm Microsoft is working with the US **industrial control software** supplier, **Foxboro**, to co-operate in trying to create a system that will combine Microsoft's Windows and **Foxboro 's software**. The venture permits new **application** fields to be opened up to Microsoft, while for **Foxboro** it gives the potential for a larger market. Such new **software** could lead to big cost reductions for medium sized firms by allowing personal computers to be used to control factories. In the world market for **industrial control software** **Foxboro** has a 13%-14% and is owned by the UK firm Siebe.  
(c) Financial Times 1995

17/7/77 (Item 2 from file: 583)  
DIALOG(R)File 583:Gale Group Globalbase(TM)  
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06072302  
Toter Punkt

GERMANY: BOOM IN FUZZY LOGICS NOT YET IN SIGHT  
Wirtschaftswoche (X1Q) 27 Oct 1994 p.136-141  
Language: GERMAN

So far, the boom on the German market for fuzzy logic as predicted by, among others, Swiss Prognos AG in 1992, has not become apparent. Prognos comments on the subject have become more cautious, in line with suppliers Kloeckner-Moeller of Bonn and **Foxboro** Deutschland of Duesseldorf. Reasons for the development are seen in a certain fear by the German industry to adopt new techniques, a misunderstanding of fuzzy logic and recession bothering important consumer industries. In response to this situation, a number of suppliers have raised their focus on business abroad. Aachen-based Inform GmbH, for instance, is active abroad in cooperation with **Foxboro** and chip manufacturer Intel. Kloeckner-Moeller relies on "convincing applications" and refers to a bridge crane at building company Hochtief equipped with the firm's "Fuzzy-SPS" since September 1994. Fuzzy-logic researcher Mr Rudolf Felix (fuzzy demonstration centre Dortmund; Fuzzy Logik Systeme GmbH) is optimistic about further development of the German fuzzy logic market. He believes in the breakthrough of fuzzy logic that has been available in Germany for no more than three years now.

17/7/78 (Item 3 from file: 583)  
DIALOG(R)File 583:Gale Group Globalbase(TM)  
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05176664  
Sun rise controls  
UK - **FOXBORO** LAUNCHES APPLICATION INTERFACES  
Manufacturing Systems (MS) 0 June 1992 p37

**Foxboro** has launched the I/A Series of **applications** interface **software**; open **application** platform; and open information server. The products are the result of the company's joint technology deal with Sun. The new releases enable bi-directional exchange of information between the Sun SPARCstation and the I/A Series **control system**. The **application** interfaces are targeted at offering plant production information to engineers and managers, together with engineering and business information for **process control** operators.

17/7/79 (Item 4 from file: 583)  
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04312185  
SIEBE REPORTS BETTER THAN EXPECTED PROFITS  
UK - SIEBE REPORTS BETTER THAN EXPECTED PROFITS  
Computergram International (CGI) 5 June 1991 p1  
ISSN: 0268-716X

Siebe (Windsor, UK), specialist engineering company, reports financial results for the year ended April 6, with pre-tax profits down 12% to GBP159 mil on sales up 8% at GBP1,481 mil. The market reacted favourably, lifting Siebe shares by 28 pence to 419 pence. The company, which last autumn spent GBP342 mil on the acquisition of **Foxboro** (Foxboro, MA), **process controls** manufacturer, boosting sales by GBP185 mil and profits by GBP500k, saw gearing soar to 103% within four weeks. Now gearing has been reduced to 98%. Chairman Barrie Stephens reports a cash flow of just under GBP70 mil, up from GBP38 mil last year. A disciplined cost-cutting

**programme** has been Siebe's saving grace, enabling it to turn **Foxboro** around in short order and position it for better margins, and Stephens points out that if it wasn't for adverse exchange rates movements, profits would have come out GBP12.4 mil better.\*

17/7/80 (Item 5 from file: 583)  
DIALOG(R)File 583:Gale Group Globalbase(TM)  
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03890207  
**PROCESS CONTROL** GOES OPEN, RISC IN **FOXBORO** -SUN TIE  
US - **PROCESS CONTROL** GOES OPEN, RISC IN **FOXBORO** -SUN TIE  
Computergram International (CGI) 11 December 1990 p1  
ISSN: 0268-716X

Siebe's **Foxboro** (Foxboro, MA) will bring open systems and RISC to the **process control** industry under an agreement signed with Sun Microsystems. **Foxboro** plans to incorporate the Sparc RISC and other Sun computer technologies into its I/A Series **industrial process** management and **control system** on an ongoing basis. The agreement also includes an exclusive marketing arrangement under which **Foxboro** will provide an integrated system to meet the needs of the two companies' industrial automation customers. The first three products under the agreement, to be available February 1991, will support bidirectional exchange of information between I/A Series systems and Sun's Sparcstations and servers, MS-DOS personal computers running Sun's PC-NFS **software**, and other machines. The products are designed to give engineers, managers and other supervisors direct access to plant production data, and process operators with any engineering or business data that they need.\*

17/7/81 (Item 6 from file: 583)  
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03808574  
PROFILE ON SIEBE  
UK - PROFILE ON SIEBE  
Financial Times (C) 1991 (FT) 31 October 1990 p21

An extended article profiles Siebe (UK), engineering group, and its restructuring **programme** after the GBP656 mil acquisition of **Foxboro**, **process control** firm. The **Foxboro** group will lose some 1,600 workers at US and European operations, as the US economy is on the verge of a recession. During 1985-89 UK firms have made 1,297 acquisitions in the US, valued at GBP60 bil. Siebe has 46.9% of sales in N America, 38.5% in the UK and Europe, and 14.6% from the rest of the world vs Lucas Industries at 19%, 34% and 10% respectively and 37% from Central Europe, and GKN at 18.8%, 33.2%, 6.3% and 41.5%. The article also discusses business attitudes for US subsidiaries of GKN, IMI, Lucas Industries and Smiths Industries.  
Copyright: Financial Times Ltd 1991

17/7/82 (Item 7 from file: 583)  
DIALOG(R)File 583:Gale Group Globalbase(TM)  
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03448299  
FOCUS ON OPEN INDUSTRIAL SYSTEMS

UK/WORLD - FOCUS ON OPEN INDUSTRIAL SYSTEMS  
Processing (PRG) 0 April 1990 p25-26  
ISSN: 0305-439X

When **distributed control systems** (DCS) first came into being in the 1970s they began a genuine revolution in industrial technology, according to P Martin, strategic market planning manager, **Foxboro**. Before, **process control** was achieved by local analogue controllers, centralised analogue digital **control systems**, or both combined. However, the **control systems** were not able to supply effective **automation** based on advanced **control** and plant management strategies. This situation has been changed by open industrial systems (OIS), which, based on an 'open' system architecture designed for industrial **applications**, puts the twin goals of high product quality and low operational costs within the reach of any process industrialist intent on automation throughout his plant. OIS systems have open communications that are compatible with standards such as MAP/OSI. OIS systems eliminate the need for large quantities of production management information to be stored in flat file data structures. Instead they use database management systems based on common access techniques, which can also be distributed among a number of storage units and processors in the system, while enabling the same query access techniques to be used to gain the information from any point in the system. This gives a true global information management structure. Two-page article further discusse the emergence of open industrial systems.

17/7/83 (Item 8 from file: 583)  
DIALOG(R)File 583:Gale Group Globalbase(TM)  
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03246321  
DEVELOPMENTS IN PROCESS CONTROL AND COMMAND EQUIPMENT  
FRANCE - DEVELOPMENTS IN PROCESS CONTROL AND COMMAND EQUIPMENT  
Zero Un Informatique Hebdomadaire (ZH) 5 January 1990 p14  
Language: French

Manufacturers of digital **process control** and command **equipment** in France are responding to the requirements of the chemical industry for which such equipment is of great importance. Standard communication protocols, such as MAP (Manufacturing Automation Protocol) are replacing, or being used alongside traditional proprietary procedures. Organisations such as IEEE, Osicom and ISA are recommending MAP, and advising manufacturers and large users to integrate the field bus specifications of the protocol. Honeywell's TDC 3000 includes a universal command network (UCN) based on the MAP protocol. **Foxboro** has developed a new range, the Intelligent Automation Series, which conforms to OSI standards and incorporates MAP and the field bus. Seimens has developed a prototype network conforming to MAP, as well as a field bus but will not introduce these products before 1991. **Process control software** packages are being improved to meet the needs of the chemical industry. Honeywell has developed **software** for **process** and quality **control** and for stock management while Seimens has reduced the number of screens required for its command and **control systems**. Future developments are likely to include the integration of expert systems in order to warn production operators of potential danger, and **Foxboro** is testing its Fault Analysis Consultant at Dupont in Nemours, France.

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Set	Items	Description
S1	10635	FOXBORO
S2	349083	CONTROL???? ?(3N)PROCESS??? ?
S3	164424	S2(15N) (AUTOMAT? OR DEVICE? OR DISTRIBUT? OR SYSTEM? ? OR - COORDINAT? OR CO()ORDINAT? OR INDUSTRIAL OR FIELD)
S4	11730	S2(15N) (MULTIVARIABLE? OR VARIABLE OR SELFTUN??? ? OR TUNE- ?? ? OR TUNING OR NONLINEAR OR LINEAR OR APPARATUS? OR APP?? ? OR BIAS OR POINT)

S5 86224 S2(15N) (INSTRUMENT? OR EQUIP? OR APPLIANCE? OR MECHANISM? -  
OR ASSEMBL?)  
S6 6733 S2(15N) (CONFIGUR? OR RECONFIGUR? OR SELFCONFIGUR? OR OBJEC-  
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S7 76920 S2(15N) (SOFTWARE OR SOFT()WARE? ? OR PROGRAM? OR PREPROGRA-  
M? OR SUBPROGRAM? OR APPLICATION? OR APPS OR CODE? ? OR CODING  
OR SOURCECODE? OR MICROCOD?)  
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S9 45220 S3:S5(S)S6:S8  
S10 911 S1(15N)S2  
S11 189 S10(S)S9  
S12 50 S11/1999:2003  
S13 139 S11 NOT S12  
S14 106 RD (unique items)  
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**14/3,K/1 (Item 1 from file: 9)**  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2003 Resp. DB Svcs. All rts. reserv.

1970957 Supplier Number: 01970957 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Foxboro joins up with Schneider**  
**(Schneider Automation and Foxboro Co to join forces to provide a total**  
**automation package of both process control and programmable**  
**control )**  
Food Manufacture, n 10, p 15  
October 1997  
DOCUMENT TYPE: Journal; News Brief ISSN: 0015-6477 (United Kingdom)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 34

(USE FORMAT 7 OR 9 FOR FULLTEXT)  
**(Schneider Automation and Foxboro Co to join forces to provide a total**  
**automation package of both process control and programmable**  
**control )**

TEXT:  
Schneider Automation and the **Foxboro** Company are joining forces to  
provide a total automation package of both **process control** and  
**programmable control**.  
The move is said to ensure common information, operation, control and  
maintenance. ....

**14/3,K/2 (Item 2 from file: 9)**  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2003 Resp. DB Svcs. All rts. reserv.

1933003 Supplier Number: 01933003  
**Trade Notes: The Foxboro Co**  
**(Nordberg Inc to resell Foxboro Co's I/A series control system and**  
**mineral processing applications under an original equipment**  
**manufacturer agreement)**  
Skillings Mining Review, v 86, n 36, p 27  
September 06, 1997  
DOCUMENT TYPE: Journal ISSN: 0037-6329 (United States)  
LANGUAGE: English RECORD TYPE: Abstract

**(Nordberg Inc to resell Foxboro Co's I/A series control system and**

**mineral processing applications under an original equipment manufacturer agreement)**

**ABSTRACT:**

Nordberg Inc (Milwaukee, WI) will resell **Foxboro** Co's (Foxboro, MA) I/A series **control system** and mineral **processing applications** as part of a complete Nordberg mineral processing solution under an original **equipment manufacturer agreement**. The first installation will take place at the Tilden Mine in Ishpeming, MI...

**14/3,K/3 (Item 3 from file: 9)**

DIALOG(R)File 9:Business & Industry(R)  
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1774440 Supplier Number: 01774440

**Foxboro Buys PCL**

**(Foxboro has acquired Predictive Controls Ltd for \$4.8 mil)**

Chemical Week, v 159, n 12, p 43

March 26, 1997

DOCUMENT TYPE: Journal ISSN: 0009-272X (United States)

LANGUAGE: English RECORD TYPE: Abstract

**ABSTRACT:**

Foxboro has acquired Predictive Controls Ltd for \$4.8 mil. **Foxboro** plans to use Predictive Controls' Connoisseur advanced control **software** in its **control system** for continuous **process** facilities. ...

**14/3,K/4 (Item 4 from file: 9)**

DIALOG(R)File 9:Business & Industry(R)  
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1636407 Supplier Number: 01636407

**Intranet Integration**

**(Sun Microsystems is developing Java-based API that will allow chemical process control applications to run on intranets and Internet)**

Chemical Week, p 45

October 30, 1996

DOCUMENT TYPE: Journal; News Brief ISSN: 0009-272X (United States)

LANGUAGE: English RECORD TYPE: Abstract

**ABSTRACT:**

Sun Microsystems is developing an **application** program interface (API) that will allow **process control programmers** in the chemical manufacturing sector to link manufacturing **systems** with other IT functions on a corporate intranet. The API, which is based on the Java **programming** language, will also allow **process control applications** to be shared by multiple facilities worldwide via the Internet. Sun is developing the API in cooperation with several **process control** and IT **system** suppliers, including Hewlett-Packard, **Foxboro** and Honeywell **Industrial Automation & Control**.

...

**14/3,K/5 (Item 5 from file: 9)**

DIALOG(R)File 9:Business & Industry(R)  
(c) 2003 Resp. DB Svcs. All rts. reserv.

1630381 Supplier Number: 01630381 (USE FORMAT 7 OR 9 FOR FULLTEXT)

MS Windows levels distributed process control playing field  
(Windows NT is becoming the automation platform for a number of distributed control system vendors)

Instrumentation & Control Systems, v 69, n 9, p 8  
September 1996

DOCUMENT TYPE: Journal; News Brief ISSN: 1074-2328 (United States)  
LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 3590

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:

...most often found on the desktop. Actual control is still usually performed either in dedicated **process control systems**, PLCs (sometimes with PC **software** running above the PLC), or in combinations of the two." McAllister adds that **Foxboro**'s Windows NT based I/A Series **systems** do allow users to perform true **process control** under Windows NT in a PC.

Windows NT or UNIX -- and why?

With all the...

14/3,K/6 (Item 6 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2003 Resp. DB Svcs. All rts. reserv.

1379786 Supplier Number: 01379786  
**BELLS CONTROL LAUNCHES SOFTWARE UNIT**  
(Bells Control Limited opened its engineering software unit in Bangalore, to develop software for Foxboro International)  
Financial Express, p 2  
January 12, 1996  
DOCUMENT TYPE: Business Newspaper ISSN: 0015-2005 (India)  
LANGUAGE: English RECORD TYPE: Abstract

ABSTRACT:

...Limited (BCL) has recently opened its engineering software unit in Bangalore. The unit will develop **software** for the hardware of **Foxboro** International of the US, used in **industrial process control**. BCL recently introduced **Foxboro**'s intelligent **automation software**, an open ended **system** for **industrial automation**. The centre, which involves an investment of \$2 million, will offer customer friendly and solution...

14/3,K/7 (Item 7 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2003 Resp. DB Svcs. All rts. reserv.

1379573 Supplier Number: 01379573  
**FOXBORO LOOKING AT SOURCING SOFTWARE FROM BELLS CONTROLS**  
( Foxboro (USA) plans to source software from Bells Controls Limited, which offers a range of process control equipment )  
Economic Times, p 17  
January 11, 1996  
DOCUMENT TYPE: Journal ISSN: 0013-0389 (India)  
LANGUAGE: English RECORD TYPE: Abstract

( Foxboro (USA) plans to source software from Bells Controls Limited,

which offers a range of process control equipment )

14/3,K/8 (Item 8 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2003 Resp. DB Svcs. All rts. reserv.

1204875 Supplier Number: 01204875  
**FOXBORO OF US IN TIE UP WITH BELLS CONTROL**  
(Foxboro joins forces with Bells Controls Ltd to source its entire global requirement of hardware for pneumatic process control systems)  
Business Standard, p 13  
May 31, 1995  
DOCUMENT TYPE: Business Newspaper (India)  
LANGUAGE: English RECORD TYPE: Abstract

ABSTRACT:

...controls Ltd (BCL) of Calcutta to source its entire global requirement of hardware for pneumatic **process control systems**. Foxboro is one of the world's largest manufacturer of **process control** instruments and **systems**. The American company has decided to close down its manufacturing facility for pneumatic **process control system** in **Foxboro** town, near Boston in the US in phases. This is the only manufacturing unit of **Foxboro** for pneumatic **process control equipment** for its global operations. BCL expects business worth \$15 million over the next 2 years...

...BCL's manufacturing unit at Taratalla, near Calcutta, will be used to manufacture the pneumatic **process control systems** for **Foxboro**. BCL plans to expand its Taratalla facility at a cost of Rs4 crore. It plans to bring in some **equipment** from **Foxboro**'s unit near Boston. BCL will supply **process control** equipment like electronic converters and pneumatic **process controllers**. BCL plans to set up its own **software** division in Bangalore at an outlay of Rs3 crore. It is also diversifying into the...

14/3,K/9 (Item 1 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2003 ProQuest Info&Learning. All rts. reserv.

01560457 02-11446  
**Advances in control**  
Fulcher, Jim  
Manufacturing Systems v15n12 PP: 39-42 Dec 1997  
ISSN: 0748-948X JRNL CODE: MFS  
WORD COUNT: 1505

...TEXT: are using Java products, we're seeing interest shift towards standardization and the adoption of **application programming** interfaces relevant to **process control** and **industrial automation**."

The **Foxboro** Co., **Foxboro**, Mass., offered demonstrations of its Java-based **applications**, including the **FoxDMM** dynamic maintenance-management package, and the **Webeenabled FoxSPC.com** real-time statistical **process control** package and **FoxDPM.com** dynamic performance monitor. Java is used in **FoxDMM** to make the **application**'s programming and database connectivity transparent to end users. **FoxDMM** combines **Maximo** maintenance-management software...

14/3,K/10 (Item 2 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2003 ProQuest Info&Learning. All rts. reserv.

01515421 01-66409  
**When 2000 hits the floor**  
Michel, Roberto  
Manufacturing Systems Crunch Time: Year 2000 Supplement PP: 18A-24A Sep 1997  
ISSN: 0748-948X JRNL CODE: MFS  
WORD COUNT: 1847

...TEXT: completely new staffing and training patterns to address the problem."

Unlike production planning and scheduling **applications**, where planning and procurement horizons already are pushing the century mark, Year 2000 problems in **process control** may not manifest themselves until the new millennium, says Peter Martin, a vice president with The **Foxboro** Co., a Foxboro, Mass.-based **process control system** vendor. "The **systems** we build essentially are real time," says Martin. "But that doesn't mean you should..."

14/3,K/11 (Item 3 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2003 ProQuest Info&Learning. All rts. reserv.

01417512 00-68499  
**Controls firms scramble to accommodate IT links**  
Groenfeldt, Tom  
Chemical Week v159n18 PP: 62-64 May 7, 1997  
ISSN: 0009-272X JRNL CODE: CEM  
WORD COUNT: 1326

...TEXT: concept of real-time applies to the entire enterprise. When SAP requires information from the **control system**, the **process control system** responds immediately." **Foxboro** transforms the data into forms that make sense to SAP **systems** within **process control**, forgoing any intermediate hardware or **software**, he says. "The data should be transformed into information in the process domain, not in..."

14/3,K/12 (Item 4 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
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00819369 94-68761  
**Making sense of collaborative computing**  
Gibbs, Mark  
Network World v11n2 PP: SS23-SS27 Jan 10, 1994  
ISSN: 0887-7661 JRNL CODE: NWW  
WORD COUNT: 2436

...TEXT: well as WinRPC, which generates RPC support for Windows.

Peter Sousa, an engineer for The **Foxboro** Co., a manufacturer of **process control systems** in **Foxboro**, Mass., says, "EZ RPC insulates our **programmers** from the network. Memory leakage was a problem [with other

RPC systems we] used but...

**14/3,K/13 (Item 5 from file: 15)**  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2003 ProQuest Info&Learning. All rts. reserv.

00788169 94-37561  
**Meet the CIM innovators**  
Noaker, Paula M  
Manufacturing Engineering v111n5 PP: 47-50 Nov 1993  
ISSN: 0361-0853 JRNL CODE: MFE  
WORD COUNT: 1932

...TEXT: 1987 new-product launch introducing more than 850 shippable line items into the manufacturing process.

**Foxboro** designed its Intelligent **Automation Series process control system** for easy installation, **configuration**, use, and operation. It is also scalable to simplify upgrading and remove the chance of...

**14/3,K/14 (Item 6 from file: 15)**  
DIALOG(R)File 15:ABI/Inform(R)  
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00698070 93-47291  
**Artificial intelligence - Section 2: Constructing and implementing successful expert systems**  
Fadum, Ole  
Pulp & Paper v67n3 PP: 87-92 Mar 1993  
ISSN: 0033-4081 JRNL CODE: PUP  
WORD COUNT: 3573

...TEXT: expert systems shells such as the expert system from Ingres. which is used by 3M.

**PROCESS CONTROL SUPPLIERS.** The distributed **process control systems** suppliers such as Honeywell, Measurex, Bailey, Fisher, **Foxboro**, ABB, Siemensl Valmet, and Yokogawa have been active in expert systems, fuzzy logic, and neural...

...DCS for operator interaction. The value added is to provider intelligent alarming and diagnoses of **process** and **control** problems. They are, to a lesser extent, already using expert **systems** for **configuration** support, and that will grow in the future.  
Supervisory control suppliers such as ABB, Measurex...

**14/3,K/15 (Item 7 from file: 15)**  
DIALOG(R)File 15:ABI/Inform(R)  
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00678235 93-27456  
**ISA, Autofact, Automation Fair highlight show season**  
Parker, Kevin; Rasmus, Dan  
Manufacturing Systems v11n1 PP: 8-10+ Jan 1993  
ISSN: 0748-948X JRNL CODE: MFS  
WORD COUNT: 1364

...TEXT: regard, Sun Microsystems, Mountain View, Calif., was at ISA/92 talking about Foxboro, Mass.- based **Foxboro** Co.'s recent introduction of the Sun SPARC-based **Application Processor 50**, a **process management and control system**. Westinghouse Electric, Pittsburgh, Pa., and its WDPF II DCS product and Newnan, Ga.-based Johnson...

14/3,K/16 (Item 8 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
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00639865 92-54805  
**The Power of Positive Partnering**  
Sykes, Charles  
Manufacturing Systems Supplement PP: 11-14 Oct 1992  
ISSN: 0748-948X JRNL CODE: MFS  
WORD COUNT: 2696

...ABSTRACT: monolithic, mainframe-based applications. To evolve beyond its acknowledged leadership in workstations for electronic design **automation** and related areas of computer-aided design (CAD), Sun has forged relationships with major **process control** companies and key **software** suppliers. Perhaps one of the most significant Sun alliances is with The **Foxboro** Co., a leader in **process control**. **Foxboro**, in mid-1992, introduced 2 new products based on the SPARC processor in its flagship...  
...TEXT: NFS networking.

#### POSITIVE PARTNERING

Perhaps one of the most significant Sun alliances is with The **Foxboro** Co., **Foxboro**, Mass., a leader in **process control**. **Foxboro** was the winner of the 1991 "Interoperability" award in manufaturuing applications presented by the trade...

...introduced two new products based on the SPARC processor in its flagship I/A Intelligent **Automation** Series. One is the **Application Processor 50**, an integrated **process management and control system**, and the other is the **Workstation Processor 50** for **process control applications**.

In a larger context, these relationships are especially promising as Sun carves out a presence...

14/3,K/17 (Item 9 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
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00183739 82-25300  
**MIS and Process Control Systems - A Meeting of Strangers**  
Schneiderman, Morrie; Beaverstock, Malcolm  
Canadian Datasystems v14n6 PP: 85-89 Jun 1982  
ISSN: 0008-3364 JRNL CODE: CAD

...ABSTRACT: accounting and finance into areas such as production and shop floor scheduling. The world of **process control** is also expanding and is being used in more complex **applications** involving both **automatic control** and **management** of the process itself. The proper connection of **process control** and **management information systems** will produce significant benefits for industry. Manufacturers have become aware of this trend and their response can often be seen in their product structure. The

**Foxboro** Co., a **process control** manufacturer, has included **process management** in its product line. New attention has also been focused on concepts aimed at...

... data processing (EDP) groups are often uncomfortable with the control concept. The views of the **process control** and DP approaches differ on plant operation, control, information, data handling, and **application** issues; however, the differing views are not incompatible. ...

**14/3,K/18 (Item 1 from file: 484)**  
DIALOG(R)File 484:Periodical Abs Plustext  
(c) 2003 ProQuest. All rts. reserv.

03147307 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Where did ion selective electrodes come from?**  
Frant, Martin S  
Journal of Chemical Education (ICHE), v74 n2, p159-166, p.8  
Feb 1997  
ISSN: 0021-9584 JOURNAL CODE: ICHE  
DOCUMENT TYPE: Feature  
LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 5102

TEXT:

... fact was now an opponent. It was a formidable task. ISEs were not only laboratory **devices** but they had important biomedical **applications**, and **Foxboro** had shown that there was a **process control** market, as well. Each required its own electrode construction and its own **instrumentation**, and each had its own technology. The inability to commit adequate resources to the biomedical...

**14/3,K/19 (Item 1 from file: 553)**  
DIALOG(R)File 553:Wilson Bus. Abs. FullText  
(c) 2003 The HW Wilson Co. All rts. reserv.

03548131 H.W. WILSON RECORD NUMBER: BWBA97048131 (USE FORMAT 7 FOR FULLTEXT)  
**Controls firms scramble to accommodate IT links: alliance networks emerge.**  
Groenfeldt, Tom  
Chemical Week (Chem Week) v. 159 (May 7 '97) p. 62+  
LANGUAGE: English  
WORD COUNT: 1420

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

... concept of real-time applies to the entire enterprise. When SAP requires information from the **control** system, the **process control system** responds immediately." **Foxboro** transforms the data into forms that make sense to SAP **systems** within **process control**, forgoing any intermediate hardware or **software**, he says. "The data should be transformed into information in the process domain, not in...

**14/3,K/20 (Item 2 from file: 553)**  
DIALOG(R)File 553:Wilson Bus. Abs. FullText  
(c) 2003 The HW Wilson Co. All rts. reserv.

03520654 H.W. WILSON RECORD NUMBER: BWBA97020654  
**Enhancing corporate performance through quality-driven pollution prevention.**  
AUGMENTED TITLE: Foxboro Co.  
Mannion, Richard F  
National Productivity Review (Natl Prod Rev) v. 16 (Winter '96) p. 25-32  
LANGUAGE: English

ABSTRACT: The Foxboro Co.'s efforts to integrate its pollution prevention programs with a total quality environment are discussed. **Foxboro**, an industrial process control instrument and automation systems maker, implemented a process known as total quality environmental management (TQEM) in 1992 so that...

**14/3,K/21 (Item 1 from file: 813)**  
DIALOG(R)File 813:PR Newswire  
(c) 1999 PR Newswire Association Inc. All rts. reserv.

1054487 NEM044  
**Foxboro Siebe to exploit growth potential with the acquisition of two high technology companies**

DATE: February 10, 1997 10:13 EST WORD COUNT: 348

... s current family of on-line analyzers, which are widely used throughout industry.

The power application division of VTA GmbH specializes in the integration of process control, automation, and information technology systems for power station projects. The acquisition of VTA further strengthens **Foxboro**'s growing presence in the power industry, adding valuable integration, engineering services and software skills...

**14/3,K/22 (Item 2 from file: 813)**  
DIALOG(R)File 813:PR Newswire  
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0482707 NE002  
**BROOKTROUT HIRES TWO WORLD-CLASS ENGINEERS WITH EXTENSIVE EXPERTISE IN DSP AND ISDN**

DATE: June 1, 1992 08:30 EDT WORD COUNT: 597

...two computer-based training programs on ISDN.

Previously Shultz was product marketing manager at the **Foxboro** Co., which develops and manufactures instrumentation and controls for fluid process industries. He also was a product specialist with Texas Instruments, a systems application engineer with Electronics Corp. of America, and in various engineering positions with Reliance Electric Co...

**14/3,K/23 (Item 1 from file: 635)**  
DIALOG(R)File 635:Business Dateline(R)  
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0671508 96-28542

**Foxboro to hire 100 engineers**

Hyten, Todd

Boston Business Journal (Boston, MA, US), V15 N51 p3

PUBL DATE: 960202

WORD COUNT: 647

DATELINE: Foxboro, MA, US, New England

TEXT:

...East, Asia and South America, are strong now, said Friscia.

But Friscia also said that **Foxboro** is benefiting from a strategic decision the company made in the 1980s to switch its **process control systems** and **software** to open- **system software** architecture. That means its **systems** aren't reliant on proprietary **software** to operate, making them compatible with other vendor's **systems** and software.

"In the **process control** world, people are quickly moving to open **systems**, and **Foxboro** holds a leadership position in that market," Friscia said.

Advances in computer networking and workstations...

**14/3,K/24 (Item 2 from file: 635)**

DIALOG(R)File 635:Business Dateline(R)

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0604986 95-61212

**Tough competition in software: Emerging firms fight for factory floor**

Berner, Robert

Patriot Ledger (Quincy, MA, US) sBUS p25

PUBL DATE: 950513

WORD COUNT: 1,464

DATELINE: Quincy, MA, US

TEXT:

...Foxboro system costs \$1 million, but has much greater capabilities. The price includes all hardware, **instrumentation** and a **process - control system** that can run a huge factory.

Naturally, **Foxboro** is countering the smaller control **software** companies' efforts, said Harris Kagan, director of technical development for the control systems division of...

**14/3,K/25 (Item 3 from file: 635)**

DIALOG(R)File 635:Business Dateline(R)

(c) 2003 ProQuest Info&Learning. All rts. reserv.

0296711 92-43220

**Brooktrout Hires Two World-Class Engineers With Extensive Expertise in DSP and ISDN**

Ide, Steve

PR Newswire (New York, NY, US) s1 p1

PUBL DATE: 920601

WORD COUNT: 564

DATELINE: Needham, MA, US

TEXT:

...two computer-based training programs on ISDN.

Previously Shultz was product marketing manager at the **Foxboro** Co., which develops and manufactures **instrumentation** and **controls** for fluid **process** industries. He also was a product specialist with Texas **Instruments**, a **systems** **application** engineer with Electronics Corp. of America, and in various engineering positions with Reliance Electric Co...

**14/3,K/26 (Item 4 from file: 635)**  
DIALOG(R)File 635:Business Dateline(R)  
(c) 2003 ProQuest Info&Learning. All rts. reserv.

0181836 91-02995  
**Sun Microsystems and Foxboro Sign Strategic Agreement**  
Vener, Erica; Miller, Paul  
Business Wire (San Francisco, CA, US) s1 p1  
PUBL DATE: 901210  
WORD COUNT: 287  
DATELINE: Mountain View, CA, US

TEXT:

...integrated product offering to satisfy the requirements of their industrial automation customers.

"This agreement with **Foxboro** represents the first major **application** of Sun's technology for real-time **industrial process control** and plant management, which we expect to be an increasingly important market for Sun," said...

**14/3,K/27 (Item 5 from file: 635)**  
DIALOG(R)File 635:Business Dateline(R)  
(c) 2003 ProQuest Info&Learning. All rts. reserv.

0086262 89-09943  
**Foxboro Rebounds: 1987 Shake-Up Leads to a Profitable 1988**  
Kostrzewska, John  
The Providence Journal-Bulletin (Providence, RI, US), V17 N44 sB p9  
PUBL DATE: 890222  
WORD COUNT: 626  
DATELINE: Foxboro, MA, US

TEXT:

...sales of the new I/A Series product.

The remainder was from traditional product lines.

**Foxboro** makes computer hardware and **software** and measuring and **instrumentation devices** to monitor and **control industrial processing**.

Its customers include chemical, oil, gas, pulp and paper industries and food and beverage processors.

**Foxboro** has staked much of its future on the I/A Series, which takes measurements of...

**14/3,K/28 (Item 6 from file: 635)**  
DIALOG(R)File 635:Business Dateline(R)  
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0063118 88-21279  
**Foxboro Co. Has Profit in 2nd Quarter**  
Joselow, Froma  
The Providence Journal-Bulletin (Providence, RI, US), V159 N147 sC p5  
PUBL DATE: 880728  
WORD COUNT: 366  
DATELINE: Foxboro, MA, US

TEXT:

...for the three months totaled \$135.28 million, versus \$120.12 million a year earlier.

**Foxboro** makes computer hardware and **software** , and measuring and **instrumentation devices** to monitor and **control industrial processing** . Its customers include chemical, oil, gas, pulp and paper industries and food and beverage processors...

**14/3,K/29 (Item 7 from file: 635)**  
DIALOG(R)File 635:Business Dateline(R)  
(c) 2003 ProQuest Info&Learning. All rts. reserv.

0048417 88-05910  
**Machine Tool Industry Shapes New Future**  
Kostrzewska, John  
The Providence Journal-Bulletin (Providence, RI, US), V104 N6 sF p1  
PUBL DATE: 880207  
WORD COUNT: 1,659  
DATELINE: RI, US

TEXT:

...reduced from 4,000 to 3,500.

The company also renovated its Cocrasset plant in **Foxboro** , introduced a new product line of measuring **instruments** to monitor and **control industrial processing** and began new training **programs** for its employees.

Hobson said there is an even split in its foreign and domestic...

**14/3,K/30 (Item 1 from file: 810)**  
DIALOG(R)File 810:Business Wire  
(c) 1999 Business Wire . All rts. reserv.

0923988 BW0133

**SIMULATION SCIENCES 3: SIMSCI Releases Connoisseur Version 14: Adaptive Model-Predictive Control Software**

October 19, 1998

Byline: Business/Technology Editors & Chemicals, Energy &

Environmental

...system, as well as several UNIX implementations (including Sun Solaris 2.x operating environment). The **program** contains built-in interfaces for most major **process control systems**, including Honeywell TDC, **Foxboro** I/A Series, ABB, Yokogawa, Fisher, Allen-Bradley, and PLC **Systems**. Connoisseur is licensed as a process analysis toolkit and for use on single and multiple...

14/3, K/31 (Item 2 from file: 810)  
DIALOG(R) File 810:Business Wire  
(c) 1999 Business Wire . All rts. reserv.

0442348 BW1127

**Gensym: Foxboro becomes Gensym Systems Integrator; Foxboro to embed Gensym's G2 Within I/A Series Applications**

November 04, 1994

Byline: Business Editors

...think our mutual customers will benefit from the synergy between Gensym's intelligent, real-time **software** products and **Foxboro**'s advanced **distributed process control systems** ." "Gensym's G2 **software** offers a proven on-line expert **system** environment that runs directly on the I/A Series System and enhances our own capabilities...

14/3, K/32 (Item 3 from file: 810)  
DIALOG(R) File 810:Business Wire  
(c) 1999 Business Wire . All rts. reserv.

0205212 BW615

**SUN MICROSYS FOXBORO: Sun Microsystems and Foxboro sign strategic agreement**

December 10, 1990

Byline: Business Editors and Computer Science Writers

...integrated product offering to satisfy the requirements of their industrial automation customers.

"This agreement with **Foxboro** represents the first major **application** of Sun's technology for real-time **industrial process control** and plant management, which we expect to be an increasingly important market for Sun," said...

14/3, K/33 (Item 1 from file: 16)  
DIALOG(R) File 16:Gale Group PROMT(R)  
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05931030 Supplier Number: 53175487 (USE FORMAT 7 FOR FULLTEXT)  
**High speed extrusion of powder coatings.**  
Swanborough, Alan

PPCJ. Polymers Paint Colour Journal, pNA  
Sept 1, 1998  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 916

... for powder coatings and is part of the international group Siebe, a world leader in **process control** and **automation**. Siebe, based in the UK, is the parent company to **Foxboro**, Eurotherm, Wonderware and Barber Colman who are all leaders in their own sectors. APV can employ **automation** technology from all these companies to give customers the latest in **process** plant **control**. The additional financial resources of Siebe have allowed an accelerated **programme** of new machine developments.

Conclusion

The co-rotating twin screw extruder continues to play a...

**14/3,K/34 (Item 2 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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05293396 Supplier Number: 48060272 (USE FORMAT 7 FOR FULLTEXT)

**JAVA WATCH**  
Software Industry Report, p005  
Oct 20, 1997  
Language: English Record Type: Fulltext  
Document Type: Newsletter; Trade  
Word Count: 771

... Java Control And Automation Framework  
Sun Microsystems Inc. released details on its Java Control and **Automation** Framework (JCAF) earlier this month, an initiative to bring implementations of Java technology to the **process control** and automation industry. Using the open, ubiquitous Java platform and the Java Control and **Automation** Framework, Sun says developers of **process control applications** can unite manufacturing sites with all other parts of a company's intranet. The goal of JCAF is to drive industry adoption of the Java environment in **process control** and **industrial automation**. According to Sun, new Java-based products from Cegelec, The Foxboro Co., Intuitive Technology Inc., Schneider **Automation**, and Westinghouse **Process Control** Div. attest to the momentum of the initiative.

Novasoft Ships Java-Based Integrated Document & Workflow **System**  
Calling it the industry's "first fully Java-based, integrated document and workflow management system..."

**14/3,K/35 (Item 3 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2003 The Gale Group. All rts. reserv.

04983988 Supplier Number: 47321354 (USE FORMAT 7 FOR FULLTEXT)  
**FOXBORO'S INTERNET-ENABLED PLANT MONITORING SOFTWARE IS NOW AVAILABLE FOR ORACLE'S NETWORK COMPUTER**  
Computergram International, n3146, pN/A  
April 23, 1997  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 249

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...is now supported by Oracle Corp's subsidiary company Network Computer Inc's Network Computer. **Foxboro**'s Statistical Process Control & Dynamic Performance Monitoring **software** is said to enable corporations using the Network Computer to keep track of plant quality...

...and FoxDPM.com, are used in industrial automation processes by businesses in the manufacturing and industrial areas. FoxSPC.com is said to be a powerful **application** for statistical **processing** and quality **control** and includes charting, calculating, rules-violation detection and alarming and data filtering functions. The FoxDPM...

**14/3,K/36 (Item 4 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2003 The Gale Group. All rts. reserv.

04829285 Supplier Number: 47105665 (USE FORMAT 7 FOR FULLTEXT)  
**OPEN NT OR NUTCRACKER - WHICH VERSION OF NT-ON-UNIX FINDS FAVOUR AT MICROSOFT?**

Computergram International, n3094, pN/A  
Feb 6, 1997  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 534

(USE FORMAT 7 FOR FULLTEXT)  
TEXT:

...appear within its own product lines. It is also said to have tried to persuade **Foxboro** Co, **Foxboro**, Massachusetts to rewrite the 7.5m lines of code in its **process control system** from scratch. Sources say **Foxboro**, being sensible, rewrote only the 100,000 lines that was needed to optimise the system...

**14/3,K/37 (Item 5 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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04758527 Supplier Number: 47002545 (USE FORMAT 7 FOR FULLTEXT)  
**SCADA starts WEB WEAVING**  
Spear, Mike  
Process Engineering, p27  
Jan, 1997  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 647

... with hardware and software developers - including major control companies such as Elsag Bailey, Honeywell and **Foxboro** - to deliver real-time **process control applications** based on its Java **programming system**.

Increasingly familiar to 'net surfers', Java is the embedded operating system that is automatically downloaded...

**14/3,K/38 (Item 6 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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04758520 Supplier Number: 47002538 (USE FORMAT 7 FOR FULLTEXT)

**Monitor from afar - via the Net**

Process Engineering, p44

Jan, 1997

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 98

... text, bar charts or graphs as the user requires. DPM.com uses the same intelligent **automation (I/A) software** as used by **Foxboro**'s I/A **process control system**.

**14/3,K/39 (Item 7 from file: 16)**

DIALOG(R)File 16:Gale Group PROMT(R)

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04620576 Supplier Number: 46797263 (USE FORMAT 7 FOR FULLTEXT)

**Industrial automation turns to the Web**

Electronic Engineering Times, p4

Oct 14, 1996

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 668

... on APIs that will make it easier to come up with platform-independent, real-time **process - control software**.

They are ABB **Systems** Control, Baan, Echelon, Elsag Bailey, FasTech Integration, **Foxboro**, HP, Honeywell **Industrial Automation & Control**, Intuititve Technology, SAP, Toshiba Industrial Systems and Valmet Automation. All will have input...

**14/3,K/40 (Item 8 from file: 16)**

DIALOG(R)File 16:Gale Group PROMT(R)

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03538981 Supplier Number: 44965804

**Process Control Software Targets Multi-Tasking, Reporting Requirements**

Genetic Engineering News, p6

Sept 1, 1994

Language: English Record Type: Abstract

Document Type: Magazine/Journal; Trade

**ABSTRACT:**

Iconics (**Foxboro**, MA) will introduce Windows-based WinWorX 4.0, **process control software** for genetic engineering which has a graphics interface and data exchange and also maintains data accuracy. B Braun Biotech is to introduce a similar Windows 4.0-based **process control program** for its Micro-MFCS (Multi Fermenter Computer **System**). It will be a multi-tasking **program** that can handle data acquisition, monitoring and control of fermenters. Large-scale applications have also...

...Reactor (ALR) for Windows by Astra Scientific International, the Windows version of the Advanced Fermentation **Software** (AFS) by New Brunswick Scientific, Notebook **software** by Labtech, Bioworks by Applikon and Intec **Controls**, the Real-time **Process Monitors** (RPS) of PerSeptive Biosystems, DOS-based Incelsoft by LH Fermentation, and ProAudit by Fisher...

14/3,K/41 (Item 9 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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03157737 Supplier Number: 44313380  
**BELLS CARVES A NICHE FOR ITSELF IN INSTRUMENTATION INDUSTRY**  
Economic Times, p13  
Dec 24, 1993  
Language: English Record Type: Abstract  
Document Type: Magazine/Journal; Trade

**ABSTRACT:**

...sophisticated range of pneumatic transmitters and control instruments. The company also executes turnkey projects in **instrumentation**. Now Bell has emerged as a leader in the **process control** industry. In 1981, the company changed its name to Bells Control Ltd and entered into...

...new plant at Belagola in Mysore and the existing plant at Calcutta was upgraded with **Foxboro** technology. A new generation of pneumatic **process control instruments** are being made here. Bells has introduced the intelligent **automation** series, an array of advanced hardware, **software**, **application** and support services which provide for true **distributed** intelligence for **process control**.

14/3,K/42 (Item 10 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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02575394 Supplier Number: 43417103 (USE FORMAT 7 FOR FULLTEXT)  
**Showing the way to open systems**  
Process Engineering, p37  
Nov, 1992  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 1925

... whose advanced RISC/SPARC technology is now embedded in the latest I/A Series 50 **system**'s hardware and **software** - right at the **process control** network level, says **Foxboro**. The company is also working with other third party **software** suppliers in the development of open packages for, for example, multivariable control and leak detection...

14/3,K/43 (Item 11 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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02546187 Supplier Number: 43374814 (USE FORMAT 7 FOR FULLTEXT)  
**Foxboro/ICT Enhances Stainless Media Interface Pressure Transmitters**  
News Release, p1  
Oct 15, 1992  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 224

... absolute models and in pressure ranges from 10 to 5,000 PSI.

To serve various **industrial**, **transportation**, or **process control**

**applications**  
, the unit is available with SAE or NPT threaded fittings  
fittings.

**Foxboro**  
/ICT, Inc., is a division of the Foxboro Company, a Siebe Plc.  
(UK) Company.

**14/3,K/44 (Item 12 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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02329888 Supplier Number: 43053617 (USE FORMAT 7 FOR FULLTEXT)  
**SIEBE GETS FOXBORO TO PERFORM; GROUP AS A WHOLE PUTS ON 7% AT GBP170m**  
**PRE-TAX FOR YEAR**  
Computergram International, n1935, pN/A  
June 4, 1992  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 353

(USE FORMAT 7 FOR FULLTEXT)  
**TEXT:**  
...The first was affected by the recession in most geographic areas, except Japan and Germany. **Process controls** specialist **Foxboro**, acquired in September 1990 for GBP342m, "returned to a significant level of profitability" in its...

...investment in inventory and receivables was reduced by 20% and the firm generated GBP55m cash. **Foxboro** has recently launched its 50 Series Work Station Processor and **Application Processor process control systems** upgrades, achieved through collaboration with Sun Microsystems Inc. In the petrochemical industry, orders came in...

**14/3,K/45 (Item 13 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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02209286 Supplier Number: 42877929 (USE FORMAT 7 FOR FULLTEXT)  
**Distributed systems look to batch control for the future**  
Process Engineering, ps9  
April, 1992  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 853

... agreement with Sun Microsystems, developers of the Unix-based SPARC workstation systems. The agreement allows **Foxboro** to incorporate SPARC and other Sun technologies into its I/A Series **process management and control system**. According to **Foxboro**, this is believed to be the first major **application** of Sun's open technology for real-time **process control** and plant management.

One of the challenges of batch production is being able to cope...

**14/3,K/46 (Item 14 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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01823852 Supplier Number: 42303317 (USE FORMAT 7 FOR FULLTEXT)  
**Chino-Foxboro Develops Japanese Language Version of US Firm's Production Control System**

Comline Industrial Machinery & Mechanical Engineering, p1  
August 20, 1991  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 132

(USE FORMAT 7 FOR FULLTEXT)  
**TEXT:**  
...instruments, has developed a small, Japanese language version of the "IA Series," a production control system developed by **Foxboro**. The new version consists of a PC, a control processor, and input-output module and a software package. The system can automatically control production parameters such as temperature, pressure and flow volume, and marketing will be targeted...

**14/3,K/47 (Item 15 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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01748768 Supplier Number: 42191420 (USE FORMAT 7 FOR FULLTEXT)  
**OEM PRESSURE TRANSDUCERS OFFER HIGH ACCURACY AND REPEATABILITY WITH HARSH MEDIA IN RUGGED ENVIRONMENTS**  
News Release, p1  
July 1, 1991  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 366

... manufacturer and supplier of high-performance, solid-state semiconductor pressure sensors and transducers for OEM application in medical instrumentation and process control applications.

For more information or to arrange a sample program, write or phone **Foxboro** /ICT.

...

**14/3,K/48 (Item 16 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2003 The Gale Group. All rts. reserv.

01626082 Supplier Number: 42007770 (USE FORMAT 7 FOR FULLTEXT)  
**HP WOOS IBM's MAIN CUSTOMERS**  
InformationWeek, p14  
April 15, 1991  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Tabloid; General Trade  
Word Count: 432

... of \$10 million per year over the cost of running the IBM 4300 mainframe environment. **Foxboro** previously used three 4381s, but upgraded its process control operations, order processing, and manufacturing systems with HP 3000 and HP 9000 systems in a networked configuration. One mainframe is still used for corporate information processing.

--Barbara DePompa

**14/3,K/49 (Item 17 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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01563084 Supplier Number: 41915334 (USE FORMAT 7 FOR FULLTEXT)  
**Walker Richer & Quinn Delivers Advanced Telnet to Sun or PC-NFS Users**  
News Release, p1  
March 5, 1991  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 865

... tweaking there."

Concurrent PC-NFS and IBM Access

Lazz Mcffenzie, who has been testing the **software** for the **Foxboro** Company, a **process control equipment** manufacturer, said that concurrent PC-NFS and IBM access is the feature that appeals most...

**14/3,K/50 (Item 18 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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01550733 Supplier Number: 41896899  
**The Sun also rises in process control**  
Chemical Engineering, p19  
March, 1991  
Language: English Record Type: Abstract  
Document Type: Magazine/Journal; Refereed; Trade

**ABSTRACT:**

Sun Microsystems' engineering workstations will be used in **Foxboro**'s I/A Series **process** management and **control** system. This represents the 1st use of Sun's open **system** architecture in realtime control **applications**. **Foxboro** will introduce 3 **software** and hardware products for the exchange of information between its **process controllers** and Sun's Sparcstations. . . .

**14/3,K/51 (Item 19 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
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01462197 Supplier Number: 41764373 (USE FORMAT 7 FOR FULLTEXT)  
**Signs & Portents**  
RISC Management, n28, pN/A  
Jan, 1991  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 68

(USE FORMAT 7 FOR FULLTEXT)  
**TEXT:**  
...In the words of Sun Vice President of Business Development Bill Larsen: "This agreement with **Foxboro** represents the first major **application** of

Sun's technology for real-time industrial process control and plant management".

14/3,K/52 (Item 20 from file: 16)  
DIALOG(R) File 16:Gale Group PROMT(R)  
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01299680 Supplier Number: 41522538  
**BATCH PROCESS CONTROL TO ADOPT COMMON GUIDELINES**  
Chemical Engineering, p30  
Sept, 1990  
Language: English Record Type: Abstract  
Document Type: Magazine/Journal; Refereed; Trade

**ABSTRACT:**

...1991, ISA's committee hopes to develop a standard that defines common terms for batch **processes** and **control systems**.

Modular **software** developed for **distributed control systems** makes it unnecessary to **program** each process change separately and makes it simpler to modify batch programs. Honeywell's Modular...

...10/90 that will enable operators to graphically design a recipe using a flowsheet. Texas **Instruments** and **Foxboro** also have developed modular **software** for batch **control processes**. Westinghouse Electric and Bailey Controls have developed batch-recipe languages.

14/3,K/53 (Item 21 from file: 16)  
DIALOG(R) File 16:Gale Group PROMT(R)  
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01154989 Supplier Number: 41313648  
**FOXBORO AT C & I FOXBORO INTRODUCES I/A SERIES SMALL SYSTEMS**  
News Release, p1  
May 1, 1990  
Language: English Record Type: Abstract  
Document Type: Magazine/Journal; Trade

**ABSTRACT:**

**Foxboro** introduces the I/A Series Small **systems** for xes wants to introduce **process control automation** with loodest initial needs. They can be used for **distributed** regulatory control and information management with existing Foxboro single-loop controllers. Or one of four...

...Series pesonal workstation, a specifically-adapted IBM AT-compatible PC tha runs I/A Series **software**, as the heart of its small **system** approach to **process control**. In a single step a number of independent loops controlled by single station controllers can...

14/3,K/54 (Item 1 from file: 47)  
DIALOG(R) File 47:Gale Group Magazine DB(TM)  
(c) 2003 The Gale group. All rts. reserv.

03005813 SUPPLIER NUMBER: 05197838 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Sicart's Tocqueville Fund bets on America. (Francois Sicart) (column)**  
Nathans, Leah  
Business Month, v130, p75(2)  
Sept, 1987

DOCUMENT TYPE: column      ISSN: 0892-4090      LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT  
WORD COUNT: 1173      LINE COUNT: 00091

... recent years up and down, in and out of the red. But this manufacturer of **process control equipment** embarked on a \$200 million R&D **program** in 1982 that Sicart believes will pay off as its chief customers, the fast recovering chemical companies, increase their capital spending. **Foxboro**'s most exciting new product is a **system** Sicart calls the "next generation" of **process control equipment**. Developed in a joint venture with Hewlett Packard, it links up heretofore incompatible computers to **control** the **processing** of a variety of products from petrochemicals to chicken soup. " **Foxboro** is two-to-three years ahead of its competition," he claims.

Right now, however, **Foxboro**...

14/3,K/55      (Item 2 from file: 47)  
DIALOG(R)File 47:Gale Group Magazine DB(TM)  
(c) 2003 The Gale group. All rts. reserv.

02659164      SUPPLIER NUMBER: 03710753      (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**The convergence of manufacturing methods. (Manufacturing Technology Supplement)**  
Bruno, Charles  
Dun's Business Month, v125, pT(5)  
April, 1985  
ISSN: 0279-3040      LANGUAGE: ENGLISH      RECORD TYPE: FULLTEXT  
WORD COUNT: 4191      LINE COUNT: 00338

... of several sources. The operating system software almost invariably comes from the vendor of the **equipment**, according to Ray Sawyer, manager of advanced management and process technology for **Foxboro**, a leading **process control** supplier. "Vendors offer a variety of **software** packages that are appropriate for about 95% of all process functions. These packages range from..."

14/3,K/56      (Item 1 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2003 The Gale Group. All rts. reserv.

10167088      SUPPLIER NUMBER: 20228241      (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Electrifying movement, high outputs and some great parts. (equipment shown at the 1997 National Plastics Exposition)**  
Schut, Jan H.  
Plastics World, v55, n9, p41(5)  
Sep, 1997  
ISSN: 0032-1273      LANGUAGE: English      RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 3043      LINE COUNT: 00238

... control of plant-wide manufacturing processes and data collection, called I/A (intelligent automation) Factory Automation System, which goes from shop floor data collecting to **Foxboro**'s Windows NT-based **process control software** for office data **systems**. Foxtracker is another new turnkey I/A NT supervisory **system**, jointly developed by BarberColman with sister company **Foxboro** Co., **Foxboro**, Mass.

The software is preconfigured...

14/3,K/57 (Item 2 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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10055295 SUPPLIER NUMBER: 20366101 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Reducing the cost of comminution.**  
Clifford, Des  
Mining Magazine, v178, n2, p112(6)  
Feb, 1998  
ISSN: 0308-6631 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 4158 LINE COUNT: 00345

... use of the crusher liners.  
Meanwhile, the Foxboro Company and Nordberg have announced an Original Equipment Manufacturer agreement that enables Nordberg to resell **Foxboro**'s I/A Series control system and mineral processing applications as part of a complete Nordberg mineral processing solution.  
The system can be supplied for new or existing Nordberg HP Series, MP Series and WF Series...

14/3,K/58 (Item 3 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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09915957 SUPPLIER NUMBER: 19900812 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Fort Knox banks on a golden future: Alaska's newest gold mine plans to recover 4.2M oz over 12 years.**  
Carter, Russell A.  
E-MJ - Engineering & Mining Journal, v198, n8, p34WW(5)  
August, 1997  
ISSN: 0095-8948 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 3281 LINE COUNT: 00252

... to be trained to operate the 36K st/d facility. They are assisted by a **Foxboro** distributed control system, working through an Allen-Bradley programmable logic controller, which provides real-time process monitoring and control functions along with historical data-trending capabilities. Despite its relatively short time in operation, the...

14/3,K/59 (Item 4 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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09060849 SUPPLIER NUMBER: 18795452 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Industrial automation turns to the Web. (1996 Instrument Society of America trade show in Chicago) (Industry Trend or Event)**  
Costlow, Terry  
Electronic Engineering Times, n923, p4(1)  
Oct 14, 1996  
ISSN: 0192-1541 LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 722 LINE COUNT: 00061

... on APIs that will make it easier to come up with platform-independent, real-time process - control software .  
They are ABB Systems Control, Baan, Echelon, Elsag Bailey, FasTech Integration, **Foxboro**, HP, Honeywell Industrial Automation & Control, Intuititve Technology, SAP, Toshiba Industrial Systems and Valmet

Automation. All will have input...

**14/3,K/60 (Item 5 from file: 148)**  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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08953954 SUPPLIER NUMBER: 18632546 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Metering, monitoring & quality control. (water supply) (The 1996 Public Works Manual) (Water Supply and Treatment)**  
Public Works, v127, n5, pC67(14)  
April 15, 1996  
ISSN: 0033-3840 LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 13592 LINE COUNT: 01134

... regard are Autocon Industries, Inc.; Bailey Controls Co.; Bristol Babcock, Inc.; Fischer and Porter; The **Foxboro** Co.; Johnson Controls, Inc.

With the development of microprocessors, **appliance** computers are adaptable to **process control**. **Instrument** manufacturers can supply **software** for **programming** pumping stations, for example. Control circuit cards can be plugged into a compatible base for...

**14/3,K/61 (Item 6 from file: 148)**  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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07867430 SUPPLIER NUMBER: 16886779 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Supervisory control. (Water Supply and Treatment)**  
Public Works, v126, n5, pC79(2)  
April 15, 1995  
ISSN: 0033-3840 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 883 LINE COUNT: 00083

... Modular, Inc.; Autocon Industries, Inc.; Bailey Controls Co.; Bristol Babcock, Inc.; Fischer and Porter; The **Foxboro** Co.; Johnson Controls, Inc.

With the development of microprocessors, **appliance** computers are adaptable to **process control**. **Instrument** manufacturers can supply **software** for **programming** pumping stations, for example. Control circuit cards can be plugged into a compatible base for...

**14/3,K/62 (Item 7 from file: 148)**  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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07269766 SUPPLIER NUMBER: 15485043 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Metering, monitoring, and quality control. (water) (1994 Public Works Manual)**  
Public Works, v125, n5, pC70(14)  
April 15, 1994  
ISSN: 0033-3840 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 11001 LINE COUNT: 00906

... industry in this regard are Amocams/Modular, Inc.; Autocon Industries, Inc.; Fischer and Porter; The **Foxboro** Co.; Johnson Controls, Inc.

With the development of microprocessors, **appliance** computers are

adaptable to process control. Instrument manufacturers can supply software for programming pumping stations, for example. Control circuit cards can be plugged into a compatible base for...

**14/3,K/63 (Item 8 from file: 148)**  
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06728383 SUPPLIER NUMBER: 13291459 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Foxboro's factory manages better without paper. (Intelligent/Automation factory in Foxboro, MA) (Special Section: Data Management News)**  
Hitchcock, Nancy A.  
Modern Materials Handling, v48, n10, p58-D1(2)  
Sept, 1993  
ISSN: 0026-8038 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 858 LINE COUNT: 00068

**ABSTRACT:** Foxboro's Intelligent/ Automation factory in Foxboro , MA, has one of the few paperless management information systems extant. The process control equipment maker uses an integrated quality information system , hand-held terminals and bar coding to transmit information in real-time to employees in a number of different departments. These...

**14/3,K/64 (Item 9 from file: 148)**  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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06162147 SUPPLIER NUMBER: 12926301 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Parts suppliers face toughening standards. (Massachusetts original equipment manufacturers) (Industry Overview)**  
Hower, Wendy  
Boston Business Journal, v12, n23, p10(1)  
July 27, 1992  
DOCUMENT TYPE: Industry Overview ISSN: 0746-4975 LANGUAGE:  
ENGLISH RECORD TYPE: FULLTEXT  
WORD COUNT: 908 LINE COUNT: 00070

... a useful product for our customer," said Ronald Pariseau, director of corporate purchasing and strategic programs for The Foxboro Co.  
Top rank unfilled

Foxboro , which makes process control instruments , started a quality certification program three years ago for its 1,800 suppliers of circuit boards, power supplies, plastic molding...

**14/3,K/65 (Item 10 from file: 148)**  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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06133338 SUPPLIER NUMBER: 12660370 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**TEN MANUFACTURING FACILITIES NAMED AMERICA'S BEST PLANTS**  
PR Newswire, 1016A1167  
Oct 16, 1992  
LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT  
WORD COUNT: 431 LINE COUNT: 00038

... Mo., manufacturer of skin care lotions, cotton swabs, nail polish and nail polish remover.

The **Foxboro** Company, Intelligent **Automation** plant in Foxboro, Mass., manufacturer of electronic **process control** systems.  
GE Fanuc **Automation** North America, Inc. in Charlottesville, Va., manufacturer of **programmable** logic controllers and computerized numerical controllers.  
The Timken Company, bearing plant in Bucyrus, Ohio, manufacturer...

14/3,K/66 (Item 11 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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05879164 SUPPLIER NUMBER: 12326785 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Siebe gets Foxboro to perform; group as a whole puts on 7% at #170m pre-tax for year. (Siebe Plc)**  
Computergram International, pCGI06040021  
June 4, 1992  
ISSN: 0268-716X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT  
WORD COUNT: 383 LINE COUNT: 00032

... The first was affected by the recession in most geographic areas, except Japan and Germany. **Process controls** specialist **Foxboro**, acquired in September 1990 for #342m, "returned to a significant level of profitability" in its...

...investment in inventory and receivables was reduced by 20% and the firm generated #55m cash. **Foxboro** has recently launched its 50 Series Work Station Processor and **Application Processor** **process control systems** upgrades, achieved through collaboration with Sun Microsystems Inc. In the petrochemical industry, orders came in...

14/3,K/67 (Item 12 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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05843991 SUPPLIER NUMBER: 12149123 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Environment, safety and advanced control: a boon for instrumentation.**  
Kane, Les A.  
Hydrocarbon Processing, v71, n3, p25(1)  
March, 1992  
ISSN: 0018-8190 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT  
WORD COUNT: 871 LINE COUNT: 00074

... by R. B. Hampton, Shell Oil Co., Houston, discussed an integrated approach to design and **application** of shutdown **systems**.  
"Reliability in **Process Control**," by J. P. Rooney, The **Foxboro** Co., **Foxboro**, Mass., discussed evaluation techniques related to hardware, **software** and human aspects.

Two papers on flowmeters were also presented.  
Proceedings can be ordered from...

14/3,K/68 (Item 13 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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05200596 SUPPLIER NUMBER: 10960547 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Distributed control systems - where to?**  
Tinham, Brian

Control and Instrumentation, v23, n5, p49(4)

May, 1991

ISSN: 0010-8022

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 2889

LINE COUNT: 00234

... well as fast ladder logic within the modules - and better signal conditioning.

Further, on the **applications** side, there have been enhancements to **Foxboro** 's Statistical Process Control package, as well as the introduction of suites dubbed the **Automation Equipment Manager** (AEM) and **Application** Interface Software (AIS). The former is essentially an equipment database index system allowing for the...

**14/3,K/69 (Item 14 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB

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05186078 SUPPLIER NUMBER: 10840591 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**IEFP '91: technology showcase. (1991 International Exposition for Food**

**Processors) (includes related information) (Processing & Control)**

Food Engineering, v63, n5, p106(8)

May, 1991

ISSN: 0193-323X

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 3591

LINE COUNT: 00307

... D-5231 Berod, Germany  
Odenberg, Inc., 6890 Luther Drive, Sacramento, CA 95823  
Retort control  
hardware &  
software

**Foxboro** Co. introduced a small, personal-computer based version of its I/A Series **process - control systems** which enables users to start **automating** with a modest investment, and by taking advantage of open architecture expand to larger systems...

**14/3,K/70 (Item 15 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB

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04882154 SUPPLIER NUMBER: 09716137 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Strategic agreement: Sun Microsystems & Foxboro. (joint technology and marketing agreement between Sun Microsystems Inc. and The Foxboro Co. enables Foxboro to use various Sun processor and computer technologies in its I/A family of real-time industrial process control and plant management systems; first three products to debut Feb 1991)**

EDGE: Work-Group Computing Report, v1, n30, p14(1)

Dec 17, 1990

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 378

LINE COUNT: 00034

... integrated product offering to satisfy the requirements of their industrial automation customers.

"This agreement with **Foxboro** represents the first major **application** of Sun's technology for real-time **industrial process control** and plant management, which we expect to be an increasingly important market for Sun," said...

14/3,K/71 (Item 16 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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04776571 SUPPLIER NUMBER: 09206819 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Process control takes command. (computer-based process monitoring and control)**  
Betts, Kellyn S.  
Mechanical Engineering-CIME, v112, n7, p64(5)  
July, 1990  
ISSN: 0025-6501 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT  
WORD COUNT: 3411 LINE COUNT: 00279

... and Some Dreams," one of his many papers on the topic. Williams' history of computerized **control** of **industrial processes** begins in 1958 with early computers that had to be **programmed** in machine language and frequently failed. The next generation began in 1964, when large, expensive, dedicated **process control** computers began to be offered by companies including General Electric Co., The **Foxboro** Co. ( **Foxboro**, Mass.), and Xerox. These systems offered both direct digital control and supervisory control capabilities but...

14/3,K/72 (Item 17 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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03931669 SUPPLIER NUMBER: 07859071 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Adjusting to self-tuning. (control systems in process industries)**  
Gianota, Caterina  
Electrical Review, v222, n11, p16(3)  
May 31, 1989  
ISSN: 0013-4384 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT  
WORD COUNT: 2307 LINE COUNT: 00181

... Adaptive controllers generally use a self-tuner to give a ball-park figure for the **tuning** coefficients and then use an adaptive algorithm to tweak these values to ensure optimal **control** of the **process** .

Despite the advantages of **automatic tuning controllers** , the **process** industries are still wary of them, and the products are not as widely used as...

...controllers. This is despite the fact that there is really no cost penalty in using **automatic tuning** . Indeed, some manufacturers, such as **Foxboro** Controls and Eurotherm, do not now make electronic **process controllers** without some form of automatic **tuning** incorporated.

Harvey Dearden, **applications** consultant at **Foxboro** , thinks that one of the biggest problems facing the acceptance of automatic **tuning** within industry is that customers tend to think they are a cure-all for bad **process control** . He says many people wanting to buy an **automatic tuner** put it on the "most notorious loop in the plant to test it".

Dearden claims...

14/3,K/73 (Item 18 from file: 148)  
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03333233 SUPPLIER NUMBER: 06264297 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Training for industrial needs, Part 5: guide to manufacturers' training**

**courses.**

Plant Engineering, v41, n22, p68(8)

Nov 25, 1987

ISSN: 0032-082X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 5491 LINE COUNT: 00511

... on your site. Contact: Lisa Hubbard, MCC Powers. Phone: 312-272-9555, ext. 723.

Advanced **Instrument** Maintenance

8 days. Contact: **Foxboro**. Phone: 800-682-0022 or 617-549-6511.

Advanced **Process** **Control**

3 days. Content: Increase knowledge of the **application** of **process** **control**. Contact: Joe Morris, Fisher Controls. Phone: 512-832-3065.

Advanced **Programmable** Logic

Controllers

3-1/2 days. Content: Introduction to the Cutler-Hammer D5000 series programmable...

**14/3,K/74 (Item 19 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB

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02334977 SUPPLIER NUMBER: 03726397 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**The convergence of manufacturing methods. (Manufacturing Technology:**

**Converging on Automation)**

Plant Engineering, v39, pSR24(5)

April 11, 1985

ISSN: 0032-082X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 4190 LINE COUNT: 00338

... of several sources. The operating system software almost invariably comes from the vendor of the **equipment**, according to Ray Sawyer, manager of advanced management and process technology for **Foxboro**, a leading **process** **control** supplier. "Vendors offer a variety of **software** packages that are appropriate for about 95% of all process functions. These packages range from...

**14/3,K/75 (Item 20 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB

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02025408 SUPPLIER NUMBER: 03108952 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Guide to training courses.**

Plant Engineering, v38, p65(21)

Jan 26, 1984

ISSN: 0032-082X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 19712 LINE COUNT: 01672

... Process Computers 1 week. Purpose: To learn how to identify the functions of hardware and **software** components found within **process** **control** computer **systems** and how to designate potential **applications** for such **systems**. Held February 6-13 and June 4-11, 1984, in **Foxboro**, Ma. Who may attend: Process engineers, computer **programmers**, and process managers. Some knowledge of **process** **control** fundamentals is required. Fee: \$900. Contact: Registrar, Educational Services, The **Foxboro** Co., Route 140, Bristol Park, Foxboro, MA 02023. Phone 617-549-6511.

Microcomputer Troubleshooting 3...

14/3,K/76 (Item 1 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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02407622  
**LABTECH'S FAMILY OF IBM PC INDUSTRIAL CONTROL SOFTWARE ADDS SINGLE & MULTI-LOOP CONTROLLER SUPPORT FOR TRUE DISTRIBUTED CONTROL**  
News Release November 27, 1989 p. 1

... wide range of loop controllers from Fenwal, Foxboro, Honeywell, and Moore Products. LABTECH's CONTROL software products provides users with a comprehensive set of industrial control functions, including process monitoring, on-line SPC, PID and cascade control, open architecture networking, fault tolerance, and redundancy. The new loop controller support includes the 5701 Process Controller from Fenwal, the 760 Series Single Station Micro Controller from Foxboro, the UDC 3000 and UDC 5000 Universal Digital Controllers from Honeywell, and the MYCRO 352...

... functionality that takes advantage of each controller's design and control capabilities, LABTECH's COBOL software can respond to processes either through controller-initiated I/O or through changes made at the PC-level. To provide maximum configuration flexibility, the Foxboro and Moore Products controllers can be interfaced to the IBM PC compatible...

14/3,K/77 (Item 2 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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02298581  
**Foxboro GB and Coneco sign exclusive agreement**  
Process Engineering September, 1989 p. 10  
ISSN: 0370-1859

Foxboro GB will codevelop with Coneco (N London, UK) engineering and related services for process control automation. The development agreement is an exclusive arrangement with Coneco, and will involve application engineering, project management, and installation services dealing with Foxboro's intelligent systems for automating process control and managing information over an entire facility.

...

14/3,K/78 (Item 3 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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02242904  
**Automation Is Impacting Sensors And Instrumentation Used In Process Control**  
Sensors & Instrumentation News July, 1989 p. N/A  
\*FULL TEXT AVAILABLE IN FORMAT 7 OR 9\* WORD COUNT: 328

... newsletter entitled Factory Automation News, is, moreover, creating opportunities for Foxboro to provide sensors for industrial automation requirements and to supply intelligent sensing, measuring and instrumentation products/ systems used for process control. The enhanced interest among the general process industries in obtaining total intelligent, integrated solutions for...

... generating opportunities for sensor companies to form alliances with major manufacturers/suppliers of sensing and **process control** products/**systems**, such as **Foxboro**. These alliances facilitate the development of total solutions that, in turn, improve the quality, productivity and cost-effectiveness of **process control** **applications**. Moreover, the interview with Bruce Hanson, marketing manager at **Foxboro /ICT** (San Jose, CA) illustrates the realistic opportunities that exist in the OEM sensor marketplace...

14/3,K/79 (Item 4 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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02197943  
**Overview: Artificial intelligence and expert systems in the food processing industry**  
Food Technology May, 1989 p. 119-158  
ISSN: 0015-6639

... Systems and the Role of the Knowledge Engineer by RA Herrod, Texas Instruments; What Expert **Systems** Can do for the Food Industry by LF Whitney, U of Massachusetts; Expert **Systems** in **Process Control** by FG Shinskey, **Foxboro**; Application of PC-Based Expert **Systems** in the Processing Plant by JJ Pinto, Action Instruments, and Developing a Corporate Expert Systems...

14/3,K/80 (Item 5 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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01808659  
**Startup costs for a new line brings loss to Foxboro**  
Providence Journal (RI) November 4, 1987 p. C;8

... J Fuller, vp for investor relations, along with money lost on shipments of its **Spectrum process controls systems**. The company posted sales of \$378, 7 mil in the 9-mo-period ending in 9/87 vs \$401.7 mil in 1986. **Foxboro** is known for its computer hardware and **software**, measuring and **instrumentation devices** to oversee and **control industrial processing**.

14/3,K/81 (Item 6 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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01642331  
**Process control system expands capability.**  
CHEMICAL ENGINEERING May 25, 1987 p. 29

**Foxboro** 's new **distributed process control** system features **applications packages** for various plant control problems. The new Intelligent Automation Series (IAS) supersedes **Foxboro** 's previous **Spectrum process control** line. Efforts have made to expand and improve the IAS system 's control **software**. Features include a global database manager program and high-level applications programs, including spreadsheet, process...

... communication of any necessary information. UNIX System V is the basic operating system for the **software** . The IAS **system** includes **Foxboro** 's EXACT expert system for automated **tuning** of **process controllers** . Overall architecture and communications protocols are designed to comply with MAP and FIELDBUS standards.

...

14/3,K/82 (Item 7 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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01624052

**A New Generation of Intelligent Automation.**  
MASS HIGH TECH May 10, 1987 p. 1,341

**Foxboro** introduces its Intelligent Automation Series that includes hardware, **software** , applications and support services that brings **distributed** intelligence to all facets of an **industrial process control** operation. **Foxboro** has spent almost \$50 mil/yr developing the series that has been partially **field** -tested at the Cogasset facility, where electronic and pneumatic instruments and complete **process control systems** are among the 1,000-plus products manufactured. The I/A **system** features standard communications protocols, standard operating **system** **software** , increased modularity, environmentally hardened hardware, truly integrated logic, batch and continuous **control** functions. The manufacturing **process** is free of heavy inventories and procedural slowdowns associated with the rate-driven, batch-type...

14/3,K/83 (Item 8 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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01613301

**Foxboro** Co stakes future on computers.  
PROVIDENCE JOURNAL (RI) April 15, 1987 p. C;61

**Foxboro** ( **Foxboro** , Massachusetts) will automate its **industrial process controls** manufacturing to boost output by 75% while reducing the staff by 65%. The company is...

...million on Research and Development for a new product line it introduced recently. The Intelligent **Automation** Series of products include workstations for factory operations that include **process control** , manufacturing and engineering. **Foxboro** will market the Intelligent **Automation** line to its current customer base, chemical and gas companies, then will broaden its marketing to manufacturers outside the **process control** field. **Foxboro** manufactures computer **software** and hardware as well as instrumentation and measuring **devices** for **industrial process** and **control** . Its markets include pulp and paper and food and beverage processors, and utilities.

...

14/3,K/84 (Item 9 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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01547608

**PC SOFTWARE AUTOMATES DATA CAPTURE FOR PROCESS CONTROL.**

NEWS RELEASE October 13, 1986 p. 1

A new personal computer **software** package from The Foxboro Company collects, **distributes**, and manages **process control** data obtained from **control systems** and **process instruments**. The Foxboro **automated data capture system** enables a personal computer user to define data fields according to control system applications, and...

14/3,K/85 (Item 10 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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01092799

**Standardizing application language systems.**  
CHEMICAL ENGINEERING PROGRESS August, 1984 p. 65-701

Guidelines for standardizing **application language systems** are presented by EH Bristol of **Foxboro**. Applications languages in **process control** are intended to work together in **distributed systems**. Some universal language independent basis of standardized communication among language systems or application protocol is...

... systems. It should also support transparent passing of requests and messages among language systems and **objects**. The design of an **application protocol** depends on the following elements: computer science **objects**, **process control objects**, address space and access rights. The evolution of specialized language **systems** depends on the development of a standard application-oriented protocol that allows mixed systems to...

14/3,K/86 (Item 11 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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00700880

**Dollar sales of US process control equipment have grown 5%/yr since 1966, and this trend should continue through 1985, according to Predicasts.**  
Chemical & Engineering News December 7, 1981 p. 15-192

**Process control equipment** includes computers and **programmable controllers**; temperature, pressure, flow rate and liquid level sensors, transmitters and controllers; materials analyzers; and...

... equipment will rise 25%/yr through 1985, though continuing declines in the prices of these **systems** will slow dollar growth, according to Creative Strategies. Producers of **process control equipment** have beaten the recession by upgrading materials, energy and labor use efficiencies at existing plants. The US chemical industry will purchase about \$2 bil worth of **process control equipment** in 1985, vs \$1.2 bil in 1981. The oil industry will account for 14% of the market by buying \$860 mil of **process control equipment** in 1981, and \$1.5 bil worth in 1985. Fastest growing market for this **equipment** is the rubber and plastics industry, which will double its \$50 mil worth of orders...

... Minneapolis), whose 1980 sales reached \$670 mil. Fisher Controls Intnl sold \$593 mil worth of **process control equipment** in 1980. **Foxboro**'s sales of this **equipment** totaled \$484 mil in 1980. The US will import \$216 mil worth of **process control equipment** in 1981, or 3.8% of US sales totaling \$5.7 bil, vs \$380 mil...

... grow 15.5%/yr, assuming 7% inflation. US producers will export \$758 mil worth of **process control equipment** in 1981, accounting for 12.6% of total sales, and \$1.4 bil in 1985...

...averaged 9% of total capital investment, including hardware, engineering and project management costs. Advances in **process control theory applications** include complete, centralized control of entire plant complexes; on-line production schedules at plants that...

14/3,K/87 (Item 12 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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00365678

**Sale of IC Transducers Inc (San Jose, Calif) to Foxboro Co (Foxboro, Mass) has been concluded.**

News Release (for further information apply to company indexed) November 16, 1976 p. 1

... worth \$885,000. IC Transducers designs and manufactures precision sensors utilizing integrated circuit technology for **applications** in the **industrial** and **process control**, automotive, and ecological markets. **Foxboro** designs and manufacturers **instruments** and **control systems** for the **process** and energy producing industries.

...

14/3,K/88 (Item 13 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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00348095

**Foxboro to acquire IC Transducers: Foxboro Co and IC Transducers Inc have agreed in principle for Foxboro to acquire ICT.**  
Paper Trade Journal September 15, 1976 p. 57

IC Transducers (San Jose, Calif) designs and manufactures precision sensors utilizing integrated circuit technology for **applications** in the **industrial** and **process control**, automotive and ecological markets. ICT sales volume for the current fiscal year will be \$1 mil. The company's stock is privately held. **Foxboro** designs and manufactures **instruments** and **control systems** for the **process** and energy-producing industries. Its 1975 sales were \$305 mil.

...

14/3,K/89 (Item 14 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
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00346831

**IC Transducers Inc (San Jose, Calif) to be acquired by Foxboro (Foxboro, Mass).**  
News Release (for further information apply to company indexed) August 13, 1976 p. 1

...purchase price was disclosed. ICT designs and manufactures precision sensors utilizing integrated circuit technology from **applications** in the **industrial** and **process control**, automotive and ecological markets. The

**Foxboro** Co, designs and manufactures **instruments** and **control systems** for the **process** and energy-producing industries. **ICT** will operate as a subsidiary of **Foxboro** under current **ICT** management, and will continue to serve all present customers in all market...

14/3,K/90 (Item 1 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

01670125 SUPPLIER NUMBER: 15050181 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Reflections on a revolution. (trends in manufacturing include popularity of computer-aided design, virtual reality) (Manufacturing) (Column)**  
Haverson, Debra Sheer  
MIDRANGE Systems, v7, n4, p38(2)  
Feb 25, 1994  
DOCUMENT TYPE: Column ISSN: 1041-8237 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1191 LINE COUNT: 00100

... for a recent CIM implementation timed to coincide with a new product launch. The division **assembles**, tests, ships and services components of **Foxboro**'s computer-based **distributed process control system**. The CIM **program** dramatically raised the division's profitability, yielded a service response rate of more than 99...

14/3,K/91 (Item 2 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01636595 SUPPLIER NUMBER: 13763608 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**A refinery's open approach to systems integration. (Systems Integration: Part 6; implementing computer-integrated manufacturing at the Delaware City Refinery; includes glossary)**  
Hardin, Dave; Wason, John; Martin, Peter  
I&CS (Instrumentation & Control Systems), v66, n4, p75(5)  
April, 1993  
ISSN: 0746-2395 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 2865 LINE COUNT: 00250

... other U.S. refineries, over the years the refinery had acquired a variety of different **process control** and refinery information systems. These included **Foxboro**'s SPEC 200, INTERSPEC, and SPECTRUM **distributed control systems** and Command Center operator consoles, **programmable logic controllers**, Texaco's Data General **process control** minicomputer, DOS-based personal computers (PCs), and UNIX-based engineering workstations. Much of this **equipment** was incompatible. To meet the project's return-on-investment objectives, these **systems**, along with any new **process control** and information **systems**, had to be integrated into the refinery's CIM architecture.

Some up-front decisions  
Several...

14/3,K/92 (Item 3 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01533117 SUPPLIER NUMBER: 12565857 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Power struggle: can MIS rule the shop? (Manufacturing) (Industry Outlook -- includes related article on why MIS should not be involved in process control)

Piszczalski, Martin

Corporate Computing, v1, n3, p217(3)

Sept, 1992

ISSN: 1065-8610

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 1982 LINE COUNT: 00165

... as control theory, a topic incomprehensible to most MIS professionals, who study information management and **systems** integration.

Both groups prefer their own **programming** languages. The function block languages of the **process - control** world (for **applications** involving synchronization and timing) contrast with the procedural languages of MIS such as COBOL and...

...for example, IBM's AD/Cycle in the MIS world and ladder logic in the **process - control** world--are also different.

Interaction with equipment vendors who do not have a stake in each other's territory forms another barrier. **Process - control** vendors such as Fisher Controls International, Honeywell, and **Foxboro** never cross over into mainstream business **systems** built by IBM, Unisys, and Hewlett-Packard, for example.

In addition, the technologies differ fundamentally. **Process control** concentrates on transforming raw materials, whereas MIS focuses on managing information. Even where both share...

14/3,K/93 (Item 4 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01512417 . SUPPLIER NUMBER: 12226655 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Outfoxing the system: **Foxboro** transforms aging disjointed networks into a fully integrated, open enterprise. (includes related article that lists things to remember when moving away from proprietary equipment to open systems) (Case Study) (Company Profile)

Becker, Pat

LAN Magazine, v7, n4, p133(3)

April, 1992

DOCUMENT TYPE: Company Profile ISSN: 0898-0012 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 2535 LINE COUNT: 00201

ABSTRACT: Peter Burrows and John Puckett provided outstanding leadership at **Foxboro** Co, a company that makes intelligent **automation** products for **process - control applications**, during **Foxboro**'s transition from a situation characterized by isolated networks using older **equipment** of various kinds into a modernized integrated, open system. The two men are quite different...

... hands of the people who best knew what had to be done.

IN THE BEGINNING

**Foxboro** has provided intelligent **automation** products and services for **process - control applications** for 84 years. It runs 50 domestic and 50 foreign sales offices. The United States...

14/3,K/94 (Item 5 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01041381      SUPPLIER NUMBER: 00502385

Distributed Process-Control Market Growing at a Rapid Pace.

Catalano, F.

Mini-Micro Systems, v16, n9, p140

Aug., 1983

ISSN: 0364-9342      LANGUAGE: ENGLISH      RECORD TYPE: ABSTRACT

ABSTRACT: A study done by Frost and Sullivan shows that the **distributed process - control market**, that is, **systems** that include microcomputer-based **programmable controllers**, network hardware and **software**, will grow fifty per cent by 1985. The market will be worth about \$1.9...

...distributed-control systems are getting more and more reliable. Frost and Sullivan list Honeywell and **Foxboro** as the two leaders in the manufacturing of **distributed process - control systems**. The major users of these **systems** are the chemical- petrochemical industry, the petroleum industry, public utilities, and the pulp and paper...

14/3,K/95      (Item 1 from file: 621)

DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

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01066056      Supplier Number: 40307325      (USE FORMAT 7 FOR FULLTEXT)

DALLAS-FORT WORTH AIRPORT To USE I/A SERIES ENERGY MANAGEMENT SYSTEM

News Release, p1

Feb 29, 1988

Language: English      Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 170

...      Startup is scheduled for mid-1988.

I/A Series Systems are part of The Intelligent **Automation** series -- an array of hardware, **software**, **applications**, and services that provide true **distributed intelligence** for **process control**.

The **Foxboro** Company is a world leader in the **application** and development of **industrial automation systems**.

b-y

PRN 6-88

I/A Series is a trademark of The Foxboro Company.

14/3,K/96      (Item 2 from file: 621)

DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

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01043582      Supplier Number: 40076526      (USE FORMAT 7 FOR FULLTEXT)

PARAGON Control (TM) 2.0

PR Newswire, pN/A

June 5, 1987

Language: English      Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 273

...      L. Paton (617) 543-7722

Product Enhancements: PARAGON Control (TM) 2.0

Intuitive PC-Based software for Process Control  
Adds Communication  
Drivers for Distributed Control and Networking

INTEC Controls Corp., of **Foxboro**, MA., has developed new drivers for its modular PARAGON Control software package to interface into...

**14/3,K/97 (Item 3 from file: 621)**  
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)  
(c) 2003 The Gale Group. All rts. reserv.

01042317 Supplier Number: 40063560 (USE FORMAT 7 FOR FULLTEXT)  
**NEW PROSMART SOFTWARE FROM WEYERHAEUSER INFORMATION SYSTEMS HELPS CONTROL MANUFACTURING PROCESSES**  
PR Newswire, pN/A  
May 26, 1987  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 677

... Availability

ProSmart is available now. It runs on DEC VAX computers under the VMS operating **system**, with a data gateway to IBM 43XX, IBM Series 1, Hewlett-Packard 3000 and **process control systems** including **Foxboro** and AccuRay. **Software** prices range from \$100,000 to \$200,000, depending on the system configuration and amount...

**14/3,K/98 (Item 4 from file: 621)**  
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)  
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01010142 Supplier Number: 39592320 (USE FORMAT 7 FOR FULLTEXT)  
**GE Series Six PC Communications Interface Compatible With SPECTRUM System From Foxboro**  
PR Newswire, pN/A  
Sept 17, 1985  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 377

... and the FOXNET

Device GateWay from The Foxboro Company. The gateway is used to interface **programmable controllers** to the **Foxboro SPECTRUM distributed system** for **process control applications**. The CCM3 is an option for the Series Six (TM) PC that allows serial communication...

**14/3,K/99 (Item 1 from file: 624)**  
DIALOG(R)File 624:McGraw-Hill Publications  
(c) 2003 McGraw-Hill Co. Inc. All rts. reserv.

0435025  
**Participants launch cooperative effort at research facility-a solar/**

**fossil-fired plant**  
POWER July, 1992; Pg 26; Vol. 136, No. 7  
Journal Code: POW ISSN: 0032-5929  
Section Heading: Instrumentation, controls, computers, and software  
Word Count: 115 \*Full text available in Formats 5, 7 and 9\*

TEXT:

Georgia Power Co and **Foxboro** Co are both (1) interested in the **application** of expert **systems** to **process control**, and (2) share an interest in a real-time, supervisory-control expert **system**. Moreover, the utility was willing to test an expert system at its research facility-a...

...to improve heat rates at the research powerplant.

Georgia Power contributed the facility, the control **system**, and knowledge of the **process** and powerplant **control systems**. **Foxboro** contributed its experience with expert- **system** applications and knowledge of powerplant control **systems**. Work on the expert system began in the fall of 1988.

**14/3,K/100 (Item 1 from file: 636)**  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

02256125 Supplier Number: 44320099 (USE FORMAT 7 FOR FULLTEXT)  
**Software Takes On Continuous Monitoring**  
Atmospheric Pollution & Abatement News, v1, n12, pN/A  
Jan, 1994  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 772

... have a joint technology and resale agreement which involves the "porting" of the Process Insights **software** to run directly in **Foxboro**'s I/A Series **process control systems**.

Pavilion's John P. Havener told us that information on the **Software** CEM has been submitted for inclusion in the reference document for the new U.S...

**14/3,K/101 (Item 2 from file: 636)**  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

01353129 Supplier Number: 41641824 (USE FORMAT 7 FOR FULLTEXT)  
**SOFTWARE REVIEW: NEED FOR PROCESS CONTROL SOFTWARE INCREASING**  
Industrial Automation Outlook, v3, n9, pN/A  
Nov, 1990  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 383

... MA), and Intellution (Norwood, MA). High-end software is supplied by many hardware vendors, including **Foxboro**, Honeywell, IBM, Digital **Equipment**, and Texas Instruments.

Source: MIRC's World **Process Control Software** Markets Report (Code : 562-10)  
COPYRIGHT 1990 by Market Intelligence Research Company

14/3,K/102 (Item 3 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

01315449 Supplier Number: 41520593 (USE FORMAT 7 FOR FULLTEXT)  
**SOFTWARE REVIEW: PC-BASED CONTROL SOFTWARE OFFERS WINDOW TO INDUSTRIAL PROCESSES**

Industrial Automation Outlook, v3, n7, pN/A  
Sept, 1990  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 464

(USE FORMAT 7 FOR FULLTEXT)  
**TEXT:**  
...five years ago in the U.S. Up to that time most of the control **software** was available only in dedicated **process control systems** manufactured by companies such as **Foxboro** and Honeywell. The **programs** were expensive and fairly hard to use. If a company offered anything resembling a man...

14/3,K/103 (Item 4 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

01118965 Supplier Number: 40844777 (USE FORMAT 7 FOR FULLTEXT)  
**Business Report - Foxboro/ICT Is Pursuing A Business Plandsignsing their engineering expertise to address the sensing applications of diverse OEM Sensors & Instrumentation News, v3, n7, pN/A**  
July, 1989  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 1094

... OEM markets and 15-20% are derived from end-user markets. The medical arena is **Foxboro** /ICT's largest OEM market followed by **process control applications** for calibrators and P/I converters. Transportation (including earth moving **equipment**) and military/aerospace **applications** are mentioned as other typical OEM markets in addition to numerous specialized applications. Foxboro/ICT...

14/3,K/104 (Item 1 from file: 647)  
DIALOG(R)File 647:CMP Computer Fulltext  
(c) 2003 CMP Media, LLC. All rts. reserv.

01106756 CMP ACCESSION NUMBER: EET19961014S0015  
**Industrial automation turns to the Web**  
Terry Costlow  
ELECTRONIC ENGINEERING TIMES, 1996, n 923, PG04  
PUBLICATION DATE: 961014  
JOURNAL CODE: EET LANGUAGE: English  
RECORD TYPE: Fulltext  
SECTION HEADING: News  
WORD COUNT: 679

... on APIs that will make it easier to come up with platform-independent, real-time **process - control software**. They are ABB **Systems** Control, Baan, Echelon, Elsag Bailey, FasTech

Integration, **Foxboro**, HP, Honeywell **Industrial Automation & Control**, Intuititve Technology, SAP, Toshiba Industrial Systems and Valmet Automation. All will have input...

**14/3,K/105 (Item 2 from file: 647)**  
DIALOG(R)File 647:CMP Computer Fulltext  
(c) 2003 CMP Media, LLC. All rts. reserv.

00595773 CMP ACCESSION NUMBER: IWK19910415S1105

**HP WOOS IBM'S MAIN CUSTOMERS**

Barbara DePompa

INFORMATIONWEEK, 1991, n 316, 14

PUBLICATION DATE: 910415

JOURNAL CODE: IWK LANGUAGE: English

RECORD TYPE: Fulltext

SECTION HEADING: TOP OF THE WEEK

WORD COUNT: 434

... of \$10 million per year over the cost of running the IBM 4300 mainframe environment. **Foxboro** previously used three 4381s, but upgraded its **process control** operations, order **processing**, and manufacturing **systems** with HP 3000 and HP 9000 **systems** in a networked **configuration**. One mainframe is still used for corporate information processing.

**14/3,K/106 (Item 1 from file: 674)**  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2003 IDG Communications. All rts. reserv.

008507

**User links minis seamlessly with mix of standards**

Byline: Paul Desmond, Senior Editor

Journal: Network World Page Number: 4

Publication Date: July 23, 1990

Word Count: 902 Line Count: 65

Text:

...our PCs and workstations can perform multifunctional roles as terminals and can basically access any **system**.'

**Foxboro**, which manufactures real-time **process control instruments** and computers, first tried to solve its problem with custom terminal-emulation **programs** that link user workstations to minicomputers on a case-by-case basis but forced them...